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ABSTRACT

To help meet the needs of Rhode Island teachers for useful environmental education materials, the Dissemination Services Unit of this state's Department of Education compiled this resource guide. The entries in this document are available either from ERIC or from the Dissemination Services Unit. A brief document description is given under most entries. This publication lists documents according to their grade level focus so that documents are categorized under general, elementary, secondary, and K-12 headings. Other sections list journal articles, bibliographies, other information sources such as perodicals and films, and state sources. Documents cover many environmental education topics such as population, land use, outdoor classrooms, field trips, ecology, and environmental education curriculum development. A separate resource guide has been developed for energy education. Although emphasis is given to Rhode Island environmental education, this guide can be of use to educators nationwide. (MR)

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ENVIRONMENTAL EDUCATION

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RESOURCE GUIDE

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RHODE ISLAND DEPARTMENT OF EDUCATION ▪ DISSEMINATION SERVICES

ENVIRONMENTAL EDUCATION is one in a series of Resource Guides produced by the Dissemination Services Unit of the Bureau of Technical Assistance. The Guides are updated regularly and are available upon request. Other Guides in the series are:

ADOLESCENT PARENTS
BILINGUAL EDUCATION
COMPETENCY BASED TEACHER EDUCATION
CONSUMER EDUCATION
INDIVIDUALIZED INSTRUCTION
METRIC EDUCATION
NEEDS ASSESSMENT
THE GIFTED AND TALENTED STUDENT

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I N T R O D U C T I O N

> "Environmental Education is the educational process dealing with man's relationship with his natural and man-made surroundings, and includes the relation of population, pollution, resource allocation and depletion, conservation, transportation, technology, and urban and rural planning to the total human environment." (Environmental Education Act, Public Law 91-516, 91st Congress, 1970.)

Environmental Education aids in developing an understanding of our relationship to the natural and man-made world, fostering a system of values consistent with the improvement and maintenance of our environment while providing us with the personal motivation to directly involve ourselves in actions designed to assure a quality of life. It engenders a respect for the democratic process and emphasizes respect for the unique worth of the individual. It is a way of looking at life, at the inter-related and inter-dependent systems upon which the individual has an effect and which in turn vitally affect him. It operates within the real world, recognizing the importance of aesthetic values. It is a life-long process producing a continued growth of environmental literacy among the populace. Environmental Education increases our understanding of environmental problems, encouraging us to seek solutions based upon an analysis of all available information and alternatives, and enabling us to become more competent in decision-making and problem-solving processes.

To meet the goals of Environmental Education, which evolve from the statements above, taken from A Proposed Plan for Environmental Education in Rhode Island, educators in our state must draw upon their skills, their knowledge and a myriad of resources. To assist Rhode Island educators in their task the Dissemination Services Unit/Education Information Services (EIS) has provided this Resource Guide in Environmental Education and a companion Resource Guide in Energy Education. The Guide is neither exclusive nor inclusive of Environmental Education materials, nor is it an endorsement of any materials. It is one resource for Rhode Island educators.

Most of the documents cited are available from the EIS. An explanation of the citations is on the next page. An order blank is included at the back of the Guide.

Additional copies of this Resource Guide are available from the EIS. Please call 277-2035.

Preparation of this Resource Guide was financed in part by a Dissemination Capacity Building Grant from the National Institute of Education (NIE-G-76-0055).

January 1978

Accession number of documents from ERIC. Use to order copies of documents which will be in microfiche format -- (a 4"x6" sheet of film which holds 70-90 pages)

ED 106 085

OPTIONS - A STUDY GUIDE TO POPULATION AND THE AMERICAN FUTURE. The Population Reference Bureau, Inc. 1973 (L)

Indicates document is available in hard copy for a 2-week loan. EIS cannot provide hard copy of ERIC documents.

This guide for exploring populations trends and their possible effects on the future. It is based on the official report of the Commission on Population Growth and the American Future.

TEACHING MATERIALS FOR ENVIRONMENTAL EDUCATION: INVESTIGATING YOUR ENVIRONMENT. U. S. Forest Service. U. S. Department of Agriculture. July 1973. (F)

Indicates availability of citation. Copies of this document are available FREE OF CHARGE as long as the supply lasts.

The environmental investigation lesson plans in this packet are designed to help teachers take an in-depth look at different components of the environment. The plans were developed with the assistance of specialists in educational processes and educators, students, and resource-agency people for whom they are designed.

Lack of an accession number indicates that document is available from the DSU in either HARD COPY or for TWO-WEEK LOAN.

GENERAL

GENERAL

ED 116 914

ENVIRONMENTAL EDUCATION TEACHING RESOURCES: PROJECTS FOR ENVIRONMENTAL PROBLEM SOLVING. National Education Association. Washington, DC. 1975. 23 pp. (L)

This publication is a guide for the design of student projects in environmental education. A few advantages of problem-focused projects are: easy incorporation into the ongoing curriculum; opportunity for joint student/teacher use of knowledge, information, and skills in action-oriented activities related to local environmental concerns; identifying, weighing, and clarifying values; research and technical reporting skills; and development of devergent and convergent thinking skills. The student projects provides a method for student involvement and inquiry-based learning. The five instructional objectives presented are based on the above-mentioned advantages. Under each objective are teaching strategies, specific instructional procedures and some sample questions to raise. The objectives, strategies and procedures serve as the basis for process activities and outcomes that can be realized through all problem-solving projects. Three projects that can be utilized and adapted by secondary and college students in their study of communication on environmental issues are outlines. Two of the projects concern environmental impact; the third, environmental research. Each project is sub-divided into objectives, focus, suggested apporaches, project desing, and evaluation. Appendiced information pertaining to organizations of environmental concern, expanded problems for study, and a bibliography of materials is to be used in conjunction with the projects.

ED 134 459

COMMON ENVIRONMENTAL TERMS: A GLOSSARY. Revised Edition. Gloria J. Stoddard. Environmental Protection Agency. Washington, DC. November, 1974. 27 pp.

This glossary is designed for students styding about the environment. The document is not intended for scientists and technicians. Severl hundred terms are included in the glossary.

ED 100 651

THE PROCESS OF CHOICE: INTRODUCTION, WHAT YOU WANT, YOUR RESOURCES, WHAT YOU ARE ALLOWED TO DO, AND HOW YOU MAKE CHOICES. Alan Levy et al. Group for Environmental Education. Philadelphia, PA. 1973. 175 pp.

These five booklets, designed for multilevel use, focus on the process of choice, and how choice directly and indirectly affects the quality of the environment. The purpose behind the booklets is to explore the process of problem solving, making it clear and comprehensible to the student's frame of reference. The series of booklets all focus on the process of chioce and include: (1) Introduction, (2) What You Want, (3) Your Resources, (4) What You Are Allowed to Do, and (5) How You Make Choices. The introduction examines the possibilities of choice through text and questions. What You Want explores the first step in the process of choice, through the identification of desires, places, functions, and alternatives. The second step in the process of choice is discussed in Your Resources through listing, discussing, problem solving, reading and reviewing charts and resources needed to obtain goals are examined. The fourth booklet looks at the rules and laws designed to protect and control society and environment, information sources, and avenues of change. The last booklet combines the problems and solutions of the preceding four booklets to assist in the selection of priorities and choices. Readings, worksheets, tables, illustrations, and projects are included in the five booklets.

ED 129 523

A MANUAL OF OUTDOOR EDUCATION. Rex A. Miller. Camp Speers-Eljabar, YMCA. Westfield, NJ 1974. 103 pp.

Within the realm of outdoor education, there are as many definitions of what it is or what it isn't as there are books. One definition is that outdoor education is teaching outside the classroom. It combines with and blends as part of the total curriculum. This handbook is designed as a manual to help train and support staff related to outdoor education programs. Although it is specifically oriented toward resident outdoor education programs, most of the material has been generalized and can easily be used by a school or resident center in developing an approach to outdoor education. The handbook includes: (1) discussions of sensory awareness, discovery learning, group dynamics and leadership, and the three-legged stool of group function styles of leadership; (2) lesson units for teaching creative arts, language arts, natural science, math, physical education and recreation, and social science; and (3) samples of forms and lists and evaluations, i.e. letter to parents, equipment list, health regulations, dining room procedure (family style feeding), school menu list, activity sign-up sheets, instructors' responsibilities and camp contract, and parent onsite evaluation. A 20-item bibliography on theories and practices of outdoor education is included.

ED 116 904

MINIATURE ENVIRONMENTS, AN ENVIRONMENTAL EDUCATION GUIDEBOOK REVISED EDITION. Bureau of Outdoor Recreation (Department of Interior). Washington, DC. 1974. 32 pp.

The purpose of this booklet is to bring into the classroom the ecological processes and principles that underlie nature. Students get the opportunity to work with natural objects and to learn about the principles that regulate them. In this revised edition, a number of publications have been compiled and printed under one title. The booklet is designed to help the teacher by supplementing existing programs with these student-oriented activities. The information includes simple terrestrial and aquatic microenvironments, as well as the ecological principles behind their construction and maintenance. All materials are common and purchased early, including the contents of the terrariums and tur le ponds. There are a number of diagrams and photographs to illustrate the procedures and principles being discussed.

ED 106 055

OUR MAN-MADE ENVIRONMENT. A COLLECTION OF EXPERIENCES, RESOURCES AND SUGGESTED ACTIVITIES. Group for Environmental Education. Philadelphia, PA. September, 1971. 59 pp.

This collection of activities, experiences, and resources focuses on the man-made environment. The activities and resources were compiled to facilitate a program based upon the teacher's and student's own living experiences in their own environment. The goals of the program are to develop the individual's awareness of his environment and subsequently his understanding of it and to instill confidence in his ability to judge the environment, hence enabling him to control and change it. An introduction, suggested activities, a collection of teaching experiences, an introductory list of resources, and a recommended library are included. The introduction contains a description of the program, concepts and implementation strategies. The activities are directed toward the discovery of the world as a purpose environment and include measuring, photography, and discussion. The collection of experiences is ideas and activities which evolved while implementing the program. A list of resources, including audio-visual aids, maps, newspapers, periodicals and books, plus a recommended library, complete the booklet.

ED 127 119

APPROVED GUIDELINES FOR KENTUCKY'S ENVIRONMENTAL EDUCATION PLAN. Kentucky State Department of Education, Frankfort. 1975. 41 pp.

In this report are the approved guidelines for an environmental education program to be implemented in the public schools of Kentucky. The contents include a definition of environmental education and an assessment of the current statewide situation. Needs, resources, and strategies as identified at a statewide conference, are included in these guidelines. Also contained in the report are the listings of the program's goals and objectives and the strategies for implementing the program. The final section of the report concerns a time frame for evaluation and credibility of the program's implementation.

ED 125 856

HOW TO TAKE THE CLASSROOM OUT INTO THE ENVIRONMENT: A RESOURCE GUIDE. Richard Peters. 1975. 26 pp.

The purpose of this resource guide is to introduce teachers to a variety of instructional strategies and then relate these experiences to both natural and social environmental phenomena and settings. It is divided into six major parts. The first is concerned with developing student awareness of the outdoors through a number of methods including guest speakers and classroom projects. The second part gives the teacher guidelines for relating the classroom to the outdoors. The following sections are concerned with the listings of numerous resources: instructional materials and resources, environmental education teacher training programs, and related television series. These four parts comprise over half of the guide.

ED 134 384

INCORPORATING ORIENTEERING IN SCHOOL PROGRAMS. Douglas Bradford. NIE. Washington, DC. March, 1977. 36 pp.

Orienteering has been described as being "either a serious sport, or a relaxing recreation." Orienteering can be a family affair or an individual fight against the clock. In its simplest form, orienteering can be described as a cross-country run, jog, or walk on a predetermined course, using a map and a compass to find several control points on the way. Orienteering realizes an ideal balance between the intellectual and the physical. It requires an integration of physical skills and conditioning with intellectual expertise. Since there are many ways to analyze and navigate land surfaces, orienteering incorporates a highly individualized combination of one's own abilities and judgment. This paper (1) defines orienteering for the educator; (2) acquaints the educator, whether school administrator or teacher with basic orienteering skills. (3) presents a rationale for the inclusion of orienteering in those areas of the school curriculum wherein it can be utilized advantageously; and (4) acquaints the educator with the factors that must be considered in establishing an orienteering program.

ED 107 468

LEARNING TO GET AROUND. AN URBAN ENVIRONMENT MAPPING UNIT. Group for Environmental Education, Philadelphia, PA. 1971. 92 pp. NOTE: Related document is ED 045 426.

This unit deals with mapping the urban environment. The unit is designed to help the student visualize his surroundings, read and interpret maps, and create maps. These understandings and skills are designed to help the student develop a sense of self-control and a sense of personal control over his environment. The unit is a student oriented, auto-instructional workbook. It begins with a pretest and is followed by 16 lessons. The lessons increase in difficulty and involvement as the student increases his skills in understanding, reading, and drawing maps. The lessons are activity oriented, and questions are answered through means of a self-check. The lessons include such activities as a treasure hunt, drawing maps, using map symbols, measuring, and drawing to scale. The various maps needed for the lessons are also included. A teacher's guide further explains the purpose and directions for each lesson and suggests additional interdisciplinary activities. Completing the guide is a section dealing with aerial mapping and one dealing with neighborhood interviews.

ED 129 531

LOCATE, PLAN, DEVELOP, USE AN OUTDOOR CLASSROOM. Soil Conservation Service (DOA). Upper Darby, PA. April, 1975. 29 pp. (L)

Designed to aid educational institutions and community organizations in selecting, planning, developing and using outdoor learning areas as outdoor classrooms, this guide includes: (1) Learning by Discovery (scientific, cultural, and recreational goals); (2) The Initial Planning Effort (use of a planning committee including teachers, administrators, local leaders, and students; a technical advisory committee; soils maps; natural resource inventories; reference books); (3) Site Selection (examples of sites with school proximity; soil diversity; water specific vegetation. etc.); (4) Soils Mapping and Resource Inventory (development of maps with photographic enlargements; site visits; an agronomic and town/country planning balance; area inventories such as cutover woodland, wet, white pine and pond, brook, and woodland areas); (5) Planning the Outdoor Classroom (facilities and special studypoints such as: soil erosion, weather stations; pioneer living; observation platforms; orientation course; soil profiles, water wells, tree stumps trails; etc.): (6) Site Development (financing, student construction committees, etc.); (7) Using and Maintaining an Outdoor Classroom (suggestions, re: biology, chemistry, math, art, shop, home economics, social studies, vocational agriculture, ecology, communication and English); (8) Bibliography (24 annotated citations and two films).

ED 108 875

SUGGESTIONS AND PROCEDURES IN DEVELOPING NATURE TRAILS. Revised. Travis E. Hendren; Alan Lenk. North Carolina State Department of Public Instruction. Raleigh, North Carolina. September, 1974. 34 pp.

Though public nature trails have been in use since the late 1800's their use on school grounds for educational purposes is a relatively new concept. The nature trail is an important tool for teaching environmental awareness and appreciation. It provides experiences for observing nature firsthand with all senses employed. It is a resource that is available to the entire school and is applicable to all curriculum areas. The purpose of this booklet is to provide information for teachers, administrators and students on how they may plan and develop a nature trail at their school. Locating the trail, trail construction, trail interpretation, and maintenance are covered in section 1. Section 2 focuses on art, science-math, language arts, and social studies activities which could evolve from classroom use of the nature trail. Section 3 provides ideas and examples of trail topics such as a marsh trail, historical trail, wood trail, and geology trail. Examples of outdoor demonstrations and charts are also included in this section. Section 4 is a list of environmental education sources and aids including associations, books, magazines, films, and resource people. The booklet concludes with a list of outstanding nature trails located in North Carolina.

ED 125 855

THE STRANDS WALK. Tom Crider, Ed. National Park Service. 1972. 18 pp.

The Strands Walk is a simple field trip activity designed to acquaint students with an unfamiliar area and with each other. The teacher's role in this activity is to help the students express what they observe, experience and question. Methods of study and concepts for emphasis are included in this publication. A major portion of the booklet is devoted to the student task forms. Each task is based on one of the Strands concepts of the National Park Service's Environmental Education Program; variety and similarity; patterns; interaction and interdependence; continuity and change; and evolution and adaptation. Three additional tasks concern problem focus. In a final section to the teacher, there are behavior objectives associated with the activity and an illustration of the data-theory cycle.

ED 106 085

OPTIONS - A STUDY GUIDE TO POPULATION AND THE AMERICAN FUTURE. The Population Reference Bureau, Inc. 1973. (L)

This a guide for exploring population trends and their possible effects on the future. It is based on the official report of the Commission on Population Growth and the American Future.

ED 103 244

OUTDOOR FUN FOR STUDENTS, AN ENVIRONMENTAL INVESTIGATION. Minnesota Environmental Sciences Foundation, Inc. Minneapolis; National Wildlife Federation. Washington, DC. 1972. 25 pp.

This environmental unit is one of a series designed for integration within an existing curriculum. The unit is self-contained and requires little teacher preparation. The philosophy of the units is based on a experience-oriented process that encourages self-paced independent student work. The purpose of this unit is to provide educational and enjoyable outdoor activities for students of all ages. The unit is divided into four sections, the first of which being concerned with seed dispersal. In the second section, students investigate goldenrod galls and the environmental influences on the wasps that hatch from them. In the next section, students study the succession of plant decomposition, and finally, they observe soil organisms and study the environmental factors that affect those organisms. The activities can be modified for use with students in all grades. Information provided includes a list of materials needed, directions, and student worksheets.

ED 134 434

TRY THESE, WE HAVE! ENVIRONMENTAL EDUCATION ACTIVITIES FOR THE TRAINABLE MENTALLY RETARDED. Deborah Benedict. Marian College. Indianapolis, Inc. 1976. 143 pp.

These environmental education materials include both out-of-classroom and in-classroom experience. The activities emphasize seven major goals including language skills, number skills, social skills, motor skills, science, and attention span. There are eight coded topical areas (1) air; (2) animals; (3) games, (4) light; (5) plants; (6) seasons; (7) soil; (8) water. Each topic contains a variety of activities related to the general theme. The activities are described on separate cards and are written for the teachers. Each card contains the following: (1) a title; (2) a purpose; (3) suggested directions; (4) a materials list, and (5) hints and instructions for the teacher. The materials were tested with trainable mentally retarded students.

ED 134 408

NATURE TRAILS FOR THE VISUALLY IMPAIRED. Syracuse University. New York. 1976. 47 pp.

Many interpretive nature trails have been established for the visually impaired in recent years. The objectives of the investigation were to (a) identify what has been done in the past in the way of nature trail design for the visually impaired, (b) compare this with what professional workers for the visually impaired consider important in the design of the facilities, and (c) to provide guidelines for the design of future trails for the visually impaired. It was determined that the "typical" nature center was over five miles from the nearest urban center, not on public transportation lines, and provided a single special trail for the visually impaired with guide ropes and braille signs. As a result of the literature search, the informal interviews with visually impaired students, and the survey of Orientation and Mobility Instructors, the following suggestions are made for the design of future nature trails; (1) No special trails should be established, as these tend to isolate the visually impaired from the rest of the visitors; (2) all trails should be clearly differentiated from the surrounding environment so that the visually impaired can use residual sight or proper mobility techniques for travel; ropes are unnecessary and often vandalized; (3) special pavement is not needed; (4) railings should be provided at hazardous areas; and (5) interpretation should be offered through the use of portable cassette tape players, and booklets for the hard of hearing.

ED 133 140

OUTDOOR EDUCATION - A GUIDE TO SITE PLANNING AND IMPLEMENTATION OF PROGRAMS. Texas Education Agency. Austin. 1976. 72 pp. (L)

This booklet presents guidelines for initiating outdoor instructional programs. Initially, the guide lists the objectives of outdoor education; survival, recreation, development of personal health and well-being, career opportunities, and social adjustment. A discussion follows on the three phases of site planning. The first phase is site analysis which involves research in topography, ecology, and land uses and control. The second phase encompasses program development which includes the statement of purpose and objectives, the role of the school site, and analysis of these roles for program development. The final phase concerns site design or a graphic representation combining site analysis and program development. The booklet also contains examples of school sites, a checklist for developing a program, guidelines for planning activities in all curricular areas, suggested learning experiences in each discipline, and resource and reference lists.

ED 103 339

ENVIRONMENTAL CURIOSITY SAMPLER. Virginia A. Stehney. Illinois Institution for Environmental Quality, Open Lands Project. Chicago, IL. November 1974. 188 pp.

The Sampler is designed to stimulate teachers, parents, students, and groups to look at various types of open spaces and facilities as resources for environmental study. Written for use with children but adaptable to older groups, the Sampler tries to engage the feelings as well as intellects of its users in the process of inquiry. It locates interdisciplinary environmental studies activities in the home, the neighborhood, and more remote places. A few of the specific topics viewed from those vantage points are the source for food, taking water for granted, looking closely at buildings, living things around you, garbage and trash, school sites, under the city, beauty around you, and open spaces and group areas. The Sampler provides background information, asks questions, suggests activities, and lists community resources and reading materials on each topic. Developed particularly for Northeastern Illinois, most of the guides activities can be transferred to other localities. The appendices contain a glossary, local and national organizations and community resources, a reader reaction sheet, directory of publisher, bibliography, and subject index.

ED 106 085

POPULATION: A POSITION PAPER ON POPULATION. Mary Beth Durner. Environmental Education Center. Oteen, North Carolina. Madison County Public Schools. Marshall, North Carolina. 1974. 76 pp.

This position paper presents an inderdisciplinary approach to the study of population. Six main sections are included in the paper: Introduction, The Growth of the Human Population, The Psychological Effects of Population Growth, Overpopulated America, Myths Concerning Population Growth and Control, and Population Education. Section 1, an introduction, opens the paper with an example of population growth in the Aztec society. Section 2 traces the history of population growth and man's steady removal of predators and diseases which once limited population growth. Section 3 examines the effects of overpopulation in relationship to basic characteristics of man. Overpopulated America. Section 4, looks at the history, present status, and future problem of population growth in America. Section 5 discusses such topics as space migration, immigration on earth, and the green revolution. The last section focuses on population education. This section includes guidelines for an interdisciplinary course, a minicourse, an episode, possible population programs, two plays, and a population survey. The paper also contains a bibliography including readings, films, filmstrips, slides, and organizations and agencies.

ED 114 269

LEARNING ABOUT THE BUILT ENVIRONMENT. Aase Eriksen; Judith Messina. Educational Facilities Laboratories, Inc. New York, N.Y.; National Association of Elementary School Principals. Washington, D.C. 1974. 88 pp.

This publication is a catalogue of resources addressed specifically to school teachers. The essence of the man-made environment is what man builds--cities, streets, houses, parks, and the spaces that connect them. Thus, the focus on the materials in this sourcebook is on what man builds, why he builds, how he builds, and how he and the environment affect one another. Included are interdisciplinary materials for use in both elementary and secondary schools. Section 1 contains information on reference material for the teacher in developing and conducting a program on the built environment--teacher guides, resource and training centers, and background materials. The second section describes learning resources for use in and out of the classroom. Included are materials that pertain specifically to the built environment and other more comprehensive programs which give a thorough treatment of the built environment as an essential component of the total environment. The third section contains descriptions of some current projects on the environment for which no curriculum materials are available but which may provide additional teaching and learning suggestions.

ED 133 217

STATE AND FEDERAL IMPLEMENTATION. Larry Schaefer. ACES. New Haven, CT. Environmental Education Center. 1975. 58 pp.

This material includes student guide sheets, reference material, the tape script for the audio-tutorial unit on State and Federal implementation. An audio tape is used with the materials. The material is designed for use with Connecticut schools, but can be adapted to other localities. This unit is designed to help answer the question of what kind of land use planning we should have as well as who should make the decision. Activities focus on land use programs in selected states, federal programs that relate to land use, and components of land use strategy.

ED 133 212

SYNTHESIS: PART II, LAND USE ATTRACTIVENESS. Rob Pressman. ACES. New Haven, CT. Environmental Education Center. 1975. 83 pp.

This material includes student guide sheets, reference material, and tape script for the audio-tutorial unit on the Synthesis Unit, Land Use Attractiveness. An Audiotape is used with the materials. The material is designed for use with Connecticut schools, but can be adapted to other localities. The unit is designed to build skills and information obtained from previous units. This unit emphasizes the development of a land use allocation map based on information on buildability and land use attractiveness. Buildability emphasizes where development should not be; this unit emphasizes where specific land uses should be.

ED 106 090

ENVIRONMENTAL EDUCATION FOR THE SEVENTIES. Ronald L. Giese; and Others. Purdue University. Lafayette, Indiana School of Agriculture. September, 1973. 353 pp.

This interdisciplinary environmental education classroom manual was designed with the needs of both educators and pupils in mind. The manual is a compilation of articles, activities, and resources which exemplifies methods of media and the philosophy pertinent to environmental education. The volume contains materials collected from a variety of sources; the U.S. Forest Service, the U.S. Department of Agriculture, Campfire Girls, educators and environmentalists. The manual is divided into five sections. Section A deals with the philosophy and concepts of environmental education and program development. Symposium abstracts, curriculum guidelines, and program guidelines are included. Section B deals with lesson plans and provides the teacher with information methods and sample plans. The activities included in this section cover environmental education in various subject areas, problem solving, investigations of both the natural and man-made environments, and a model for an environmental education program. Section C contains listings of resource books, reprints, simulations, kits, graphics, film transparencies, silent films, and film loops: Section D contains an aids bibliography complied for the U.S. Office of Education and presents a comprehensive listing of materials prepared for teachers. A further listing of environmental film is included in Section E.

All of the following documents are available from the DSU in either Hard Copy (HC) or available for two-week loan (L).

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AN ANNOTATED CATALOG OF ENVIRONMENTAL LEARNING RESOURCES. Ohio Department of Education. Columbus. 1973.

> This catalog includes classroom aides (for students) and reference material (for teachers) all indexed according to subject, title, and grade level.

A REVIEW OF RESEARCH RELATED TO ENVIRONMENTAL EDUCATION. Robert G. Roth. ERIC/SMEAC, Center for Science, Mathematics and Environmental Education. 1976.

> The purpose of this review is to: (1) summarize accomplishments since the publication of 1972, and (2) determine areas appropriate for further study in environmental education.

A REVIEW OF RESEARCH RELATED TO ENVIRONMENTAL EDUCATION 1973-1976. Robert E. Roth. ERIC/SMEAC. Ohio State University, Columbus. 1976.

> This is an Environmental Education Information Report that includes chapters on curriculum and program development; simulations, gaming and modeling, evaluation instruments for environmental education, camp programs, etc.

FUNDAMENTALS OF ENVIRONMENTAL EDUCATION: REPORT OF THE SUBCOMMITTEE ON ENVIRONMENTAL EDUCATION, FEDERAL INTERAGENCY COMMITTEE ON EDUCATION. U.S. Department of HEW/Education Division. November 1976.

> A paper developed by the FICE Subcommittee on environmental education attempting to set forth fundamentals about the environment that informed citizens need to understand in order to deal with the wide variety of environmental issues confronting them today.

ADMINISTRATIVE CONCERNS INHERENT IN THE DEVELOPMENT OF A MULTIDISCIPLINARY K-12 ENVIRONMENTAL STUDIES CENTER. David L. Scott. 1976.

> A study documenting the need for a comprehensive master plan for continuation and future development of environmental education in the Mobile County Alabama Public School System.

NO DEPOSIT-NO RETURN, MAN AND HIS ENVIRONMENT: A VIEW TOWARD SURVIVAL. Huey D. Johnson. Addison-Wesley Publishing Company, Reading, MA 1970.

An anthology of papers presented at the 13th National Conference of the U. S. National Commission for UNESCO held in San Francisco, CA. November 1969.

RESOURCE GUIDE TO ENVIRONMENTAL EDUCATION. New Jersey Department of Education, Trenton.

A document prepared to familiarize the educators of New Jersey with a wide variety of materials available for environmental education. Listed in bibliographic style.

CONSERVATION GOES TO TOWN. Soil Conservation. U. S. Department of Agriculture, Soil Conservation Service. November, 1969.

A collection of articles on urban land use planning and how it helped save money in several urban building projects.

A GUIDE TO PLANNING AND CONDUCTING ENVIRONMENTAL STUDY AREA WORKSHOPS. National Education Association and the National Park Service. U. S. Department of Agriculture. 1972.

A guide prepared to assist teachers in the development and execution of environmental study and workshops. It specifically considers workshop design variables, the design process, workshop content, and workshop outcome.

ENVIRONMENTAL EDUCATION 1975: A STATE-BY-STATE REPORT. John F. Disinger et al. ERIC/SMEAC. Ohio State University. 1976

An environmental education information report issued to analyze and summarize information related to the teaching and learning of environmental education.

ETHICS FOR ENVIRONMENT: THREE RELIGIOUS STRATEGIES. Dave Steffenson, Ed. et al. 1973.

The proceedings of a national conference held at the University of Wisconsin-Green Bay.

ENVIRONMENTAL EDUCATION IN ACTION-I: CASE STUDIES OF SELECTED PUBLIC SCHOOL AND PUBLIC ACTION PROGRAMS. Clay Schoenfield et al. ERIC/SMEAC Ohio State University. January, 1977.

This volume, and Environmental Education Information Report contains realistic action programs that can serve as models for the classroom teacher, principal, curriculum consultant, superintendent, state department official, or teacher educator.

LAND RESOURCES TODAY: ISSUES, CITIZENS' ROLES, POLICY INSTRUMENTS. Special Task Force on Land Use/Extension Service. U. S. Department of Agriculture. Washington, DC January, 1975.

This packet containing 3 pamphlets of educational materials was developed by a Special Task Force on Land Use charged with explaining the issues in land use, describing instruments for shaping land use policy, and discussing how citizens may participate more fully in the shaping process.

LAND USE PLANNERS..SOIL SURVEYS CAN HELP YOU. Soil Conservation Service. U. S. Department of Agriculture Washington, DC September 1974.

A pamphlet briefly describing the various ways that soil surveys can help people plan how to buy and use land.

BEYOND CONFLICT OR COMPROMISE: HUMAN PROGRESS. Environmental Protection and the United Nation's Development Program.

A collection of brief reports by United Nation's experts to prove the economic growth and social change can be successfully wedded to environmental protection and improvement.

CURRENT ISSUES IN ENVIRONMENTAL EDUCATION - 1975. SELECTED PAPERS FROM THE FOURTH ANNUAL CONFERENCE OF THE NATIONAL ASSOCIATION FOR ENVIRONMENTAL EDUCATION. ERIC/SMEAC. Ohio State University. 1975.

An Environmental Education Information Report containing selected papers presented at NAEE. Topics include classroom materials for environmental education, environmental economics, and sociological myths. Contributors vary from those in elementary school classrooms to those in universities, from those in public agencies to those in industry.

KNOW THE SOIL YOU BUILD ON. Agriculture Information Bulletin 320. Soil Conservation Service. U. S. Department of Agriculture. June, 1967.

> Pictorial monograph on the advantages of knowing the type of soil you propose to build on, complete with graphic explanations of what happens to structures built on various types of soils and locations.

LAND FORMS OF THE UNITED STATES. U. S. Department of the Interior/ Geological Survey. 1974.

> A concise pamphlet providing brief descriptions of the various United States landforms complete with pictures.

FEDERAL EDUCATION PROGRAMS WITH POTENTIAL FOR PROVIDING TECHNICAL OR FINANCIAL ASSISTANCE TO ENVIRONMENTAL LEARNING ACTIVITIES. U. S. Environmental Protection Agency. Washington, DC.

> A list of projects which supported environmental learning in the past or which could support it in the future, designed to provide information to many different groups and individuals.

EVALUATIONS OF ENVIRONMENTAL EDUCATION CURRICULUM MATERIALS. Western Pennsylvania Conservancy. Pittsburgh, PA January, 1975.

> A publication prepared to provide educators with a new and simple guide to aid them in selecting usable environmental education curriculum materials. It includes ordering information, and material descriptions along with a subjective critique.

MAN BUILDS-MAN DESTROYS: A TELEVISION VIDEO TAPE SERIES FOR ENVIRONMENTAL UNDERSTANDING. Osborn Segerberg, Jr. State Department of Education, New York and United Nations Television.

> The guidebook to a series of video tapes on Environmental Education. With examples drawn from across the world, filmed on location, and with the cooperation of knowledgeable experts on the complex of environmental and economic specialties, practically every aspect of individual, corporate and governmental impact on the quality of the total environment is examined.

A NEW ROLE FOR GEOGRAPHIC EDUCATION: VALUES AND ENVIRONMENTAL CONCERNS. Richard A. Cole. National Council for Geographic Education. 1974.

An important addition to the Do It This Way Series, this monograph brings together two crucially important areas. Geography has contributed to a revised concern over environmental awareness, while education has provided a new focus on human values and sensitivity. The authors present exciting strategies for dealing with the interface.

SOIL EROSION: THE WORK OF UNCONTROLLED WATER. Agriculture Information Bulletin 260. Soil Conservation Service. U. S. Department of Agriculture. 1971.

A brief description of the process of soil erosion and its effect on land.

ASSISTANCE AVAILABLE FROM THE SOIL CONSERVATION SERVICE. U. S. Department of Agriculture, Soil Conservation Service. 1974.

A brief pamphlet describing the kinds of technical assistance available from the Soil Conservation Service to individuals, groups, organizations, cities and towns, and county and state governments, to help reduce the costly waste of land and water resources.

BETTER COMMUNITIES THROUGH RESOURCE PLANNING, AN SCS ENVIRONMENTAL QUALITY AID. Soil Conservation Service. Soil Conservation. December, 1974.

A collection of articles on land resource planning and how it helped save money in several building projects.

A CITIZEN'S GUIDE TO CLEAN WATER. Izaak Walton League of America. Arlington, VA.

An excellent citizen's manual that explains the development of the Federal Water Pollution Control Act and amendments in layman's terms and explains the specific roles of states, locals, and citizens under the act. It also delineates the standards, planning programs and legal action available.

KEEP IT CLEAN: A PLAN FOR WASTE MANAGEMENT AT OUTDOOR EVENTS. Keep America Beautiful, Inc. 1977.

> Steps for reducing littering at fairgrounds, sporting events, outdoor entertainment areas and during recreational activities.

A DIRECTORY OF PROJECTS AND PROGRAMS IN ENVIRONMENTAL EDUCATION. Fourth Edition. John F. Disinger. ERIC/SMEAC. Ohio State University, Columbus. December 1976.

> Included are summaries of efforts spanning a broad spectrum: K-12 formal education, post secondary formal education, governmental agencies, and private organizations.

E. P.: THE NEW CONSERVATION. Charles J. Griffith et al. The Izaak Walton League of America. 1971. (F)

> This publication is written to encourage understanding of policies, and support of activities designed to enhance environmental quality and maintain ecological balance; to demonstrate the use of such curricula in model educational programs and to evaluate the effectiveness thereof, to disseminate curricular materials and information for use in educational programs throughout the nation; to provide training programs for teachers, other educational personnel, public service personnel, and community and industrial business leaders and employees, and government employees at State, Federal and local levels.

SOUNDS AND NOISES. A POSITION PAPER ON NOISE POLLUTION. Thomas L. Chapman Environmental Education Center. Oteen, NC. 1974. 84 pp.

> This position paper focuses on noise pollution and the problems and solutions associated with this form of pollution. The paper is divided into the following five sections: Noise and the Ear, Noise Measurement, Ill Effects of Noise, Acoustics and Action, and Programs and Activities. The first section identifies noise and sound, the beginnings of noise pollution, and describes the progress of hearing. The third section, Ill Effects of Noise, examines some of the phychological and physiological effects produced by noise pollution. The fourth section introduces acoustics and outlines some measures for combating and controlling noise. The fifth section, Programs and Activities, suggests activities which can be used to explore noise and noise pollution. A glossary and Bibliography are included.

RESIDENT OUTDOOR EDUCATION: A PLANNING GUIDE. Ohio Department of Education. 1973.

> Guidelines written mainly for elementary programs of one week's duration--the type most frequently encountered. They could prove useful whether the resident outdoor experience being planning for elementary or secondary grades, city or rural children for a week-long stay or one overnight.

SUGGESTIONS AND PROCEDURES FOR DEVELOPING TEACHING-LEARNING-STATIONS. Travis E. Hendrn et al. North Carolina State Department of Public Instruction, Raleigh. July 1974.

> This booklet is a collection of outlines for various teaching-learning- stations which were developed by 21 teachers at Barnardsville, N. Carolina. The purposes for such stations, which can be developed inexpensively by students and teachers on school property, are: (1) to create outdoor and environmental awareness, (2) to create outdoor recreation and environmental sensitivity, (3) to provide occupational exploration, and (4) to provide occupational training. Twenty-nine stations are included in the booklet. In-depth explanation of stations and complete bibliography.

ENVIRONMENTAL EDUCATION CONCEPT INVENTORY. Mobile County Public Schools. (mimeographed) 1974.

> A seventeen page compilation of concepts to provide school systems with the nucleus for beginning an environmental program.

ENVIRONMENTAL EDUCATION GUIDE. Vermont Department of Education. June, 1976.

A publication developed to help every community, in both its design for education, and in its programs of educational activities to creatively and realistically bring about continuous interaction between its students and the laboratory of the out-of-doors for sustained action toward a more ecological and harmonious perspective to our natural environment heritage.

ENVIRONMENTAL EDUCATION IN ACTION II, A SOIL CONSERVATION SERVICE ENVIRONMENTAL QUALITY AID. Soil Conservation Magazine. U. S. Department of Agriculture. August 1975.

A collection of short articles describing activities conducted in a variety of settings by groups involved in environmental education.

A REPORT ON THE NORTH ATLANTIC REGIONAL SEMINAR ON ENVIRONMENTAL EDUCATION, organized by the Alliance for Environmental Education. August, 1977.

This report is an account of the North American Regional on Environmental Education that was held in St. Louis, Missouri from October 5 to 8, 1976. The report details the extensive data gathering and planning efforts, the Seminar itself and some of the actions that have occurred as a result of the meeting.

NATURE STUDY AND THE HANDICAPPED. The American Nature Study Society.

An entire issue of Nature Study, a Journal of Environmental Education and Interpretation. Some of the articles included are "Using Natural Science to Help Blind Children Tune in to the World and Expand Their Horizons," and "Conservation Experiences with the Mentally Handicapped: Recycling Paper -- Save Those Trees!"

PEOPLE AND NATURAL RESOURCES: POCKETBOOK FOR ENVIRONMENTAL AWARENESS. U.S. Youth Conservation Corps. Forest Service. U.S. Department of Agriculture and U.S. Department of Interior (F).

A handbook designed for Youth Conservation Corps for environmental awareness activities in the field situation, such that environmental awareness can be integrated with the projects and other camp activities.

PEOPLE AND THEIR ENVIRONMENT: TEACHER'S CURRICULUM GUIDE TO CONSERVATION EDUCATION, GRADES 4, 5, 6. Matthew J. Brennan, ed. 1972.

The second in a series of 8 curriculum guides developed by the South Carolina Department of Education which suggests an approach to the teaching of conservation as an integral part of various subject matter areas at all levels of education.

AN IN-SERVICE WORKSHOP FOR TEACHER TRAINING IN ELEMENTARY ENVIRONMENTAL EDUCATION. Nolde Forest State Park Environmental Education Center. 1973.

A complete schedule and agenda of the workshop.

ECO-KIDS OFF TO THE FORESTS. Loretta Bell. Highline Public Schools. Seattle, WA. 1976. 93 pp.

This unit was designed for use with fourth-grade students; it focuses on three forest biomes. The unit includes 8 lessons, as well as additional activities. The activities can be adapted to other sites besides Washington state. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

AN OUTLINE FOR TEACHING CONSERVATION IN ELEMENTARY SCHOOLS. U. S. Department of Agriculture,Soil Conservation Service. Revised, July 1971.

This outline suggests an approach to the teaching of environmental conservation as an integral part of all subjects in the elementary school curriculum, and encourages individualized instruction, problem solving and the use of a variety of learning materials in different situations. It is organized by grade level with a major theme for each level.

SUGGESTED ACTIVITIES FOR ENVIRONMENTAL EDUCATION IN THE ELEMENTARY SCHOOLS. Texas Education Agency. 1977.

This was designed as a model to assist elementary teachers in developing environmental education activities in all subject areas. It provides for pupils in kindergarten through the sixth grade an array of direct involvement activities which are based upon human concerns ranging from personal and economic security to consumer behavior and career activities. Minimum emphasis is placed upon listening and maximum emphasis is placed upon action.

CONTROL SEDIMENT- KEEP WATER CLEAN. USDA Soil Conservation Service. Soil Conservation. September, 1969.

A collection of articles on sediment control.

USE THAT CAMPUS. Division of Forestry, Fisheries and Wildlife Development. Tennessee Valley Authority. Norris, TN.

A publication developed to show how the natural features on campuses can be used effectively in environmental education, and indirectly to plead for preservation of as much of the natural landscape as possible on new school sites.

OUR NATURAL RESOURCES: THE CHOICES AHEAD. U. S. Department of the Interior Conservation Yearbook No. 10. 1974.

The tenth anniversary issue of the Yearbook series published by the U. S. Department of the Interior. This edition addresses itself to some of the tasks of reconciling growth with the objectives of environmental quality and resource conservation. Illustrated with full color photographs.

MAN AND HIS ENVIRONMENT. AN INTRODUCTION TO USING ENVIRONMENTAL STUDY AREAS. Association of Classroom Teachers. National Education Association. 1970.

This is a volume one of the "New Developments in Teaching Series" designed to introduce teachers to new ideas and practices that give promise of meeting current needs in education.

TEACHING MATERIALS FOR ENVIRONMENTAL EDUCATION: INVESTIGATING YOUR ENVIRONMENT. U.S. Forest Service. U.S. Department of Agriculture, July, 1973. (F)

The environmental investigation lesson plans in this packet are designed to help "teachers" take an in-depth look at different components of the environment. The plans were developed with the assistance of specialists in educational processes and educators, students, and resource-agency people for whom they are designed.

ENVIRONMENTAL EDUCATION STRATEGIES. New York State Education Department and the University of the State of New York, 1972 (F).

The strategies presented in this publication have been prepared as resources for teacher use primarily at the middle school, junior high school, and senior high school levels. However, the strategies which focus upon basic environmental concepts, family participation activities, student projects, and out-of-state classroom experiences are particularly adaptable to the lower elementary grades.

FINDING SOLUTIONS TO ENVIRONMENTAL PROBLEMS: A PROCESS GUIDE. Jonathan M. Wert and Michael A. Magnoli. 1976.

This guide is an attempt to provide a workable methodology for helping college students and citizen groups to identify the most pressing environmental problems in their communities and to find solutions to them. With a little modification, it can also be used by high school students who are interested in independent or team studies.

ELEMENTARY

ELEMENTARY

ED 132 015

ACTING FOR ECOLOGY. Wayne Ausen. Highline Public Schools. Seattle, WA. 1976. 15 pp.

This unit was designed for the fourth-, fifth-, and sixth-grades to learn about ecology with the use of creative drama. The six lessons can be interchanged in any way that fits the needs of the class. Use of all six lessons should take about two weeks, but time will vary depending on how each class works. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 099 216

A MULTIDISCIPLINARY PROCESS CURRICULUM IN ENVIRONMENTAL EDUCATION. GRADE 1. Edmonds School District 15. Lynwood, WA. 1973. 135 pp.

This first grade curriculum guide is based on a multidisciplinary approach to environmental education. The guide includes activities, guidelines for field trip planning, and a resource section. The guide deals with the subjects of animals, air, water, and litter. Each subject section includes activities based on the physical characteristics, man's use, and man's misuse of the subject. These activities may be used individually or in sequence to promote the development of positive attitudes toward the environment.

ED 099 217

A MULTIDISCIPLINARY PROCESS CURRICULUM IN ENVIRONMENTAL EDUCATION. GRADE 2. Edmonds School District 15. Lynwood, WA. 1973. 147 pp.

This second grade curriculum guide is based on a multidisciplinary approach to environmental education. The guide includes activities, guidelines for field trip planning, and a resource section. The guide deals with the subjects of plants, soil, and litter. Each subject section includes activities based on the physical characteristics, man's use, and man's misuse of the subject. Activities may be used individually or in sequence, and aim to promote the development of positive attitudes toward the environment. Each activity provides the teacher with objectives, teacher background information, a materials list, a preactivity, the activity, a postactivity, supplemental activities and illustrations intended for copying. Guidelines for conducting a field trip are included to facilitate the teacher in teaching in the out-of-doors.

ED 128 083

SPRING: UNIT MANUAL NINE. CURRICULUM GUIDE. Downey, Mary Anne, et al. George Peabody College of Teachers, Nashville. 1972. 78 pp.

This is number nine in a series of resource manuals consisting of 11 sequenced curriculum guides developed by the Demonstration and Research Center for Early Education (DARCEE) for use in early childhood education programs. Emphasis is placed on the development of sensory, abstracting and mediating, and response skills. The projected order of the units is: (1) All About Me. (2) Plants, (3) Autumn, (4) Home and Family, (5) Winter, (6) Forest Animals, (7) Neighborhood and Community, (8) Farm Animals, (9) Spring, (10) Transportation, (11) Farm Crops. Each unit is intended to build upon skills developed in the preceding ones. The ninth unit, "Spring," is primarily a science unit. The major content objective is to develop the child's understanding of spring and the changes that occur in plants, animals, weather, and people in the spring. Instructional activities are presented side by side with basic skills to be developed, and space is provided for teachers to outline additional activities and skills. The appendix includes patterns for teacher-made materials.

ED 125 838

STRATEGIES TO AFFECT STUDENT SENSORY AWARENESS OF THE ENVIRONMENT IN A RURAL SCHOOLS SETTING: KINDERGARTEN THROUGH GRADE THREE. 1976. 15 pp.

Presenting eight simple environmental education sensory lessons designed for K-3 students in rural areas, this guide briefly details the rationale and means for developing proximity congruence between studies and other outdoor activities are briefly discussed. The format of each sample sensory lesson includes: an activity focus; grade range; concept, purpose; and numerous suggested activities. The areas of focus include: senses; shape and form; trees, living things; local birds, plants and animals; early spring flowers; and pond life. Exemplary activities include: finding man-made geometric forms such as buildings, signs, fences, etc. and identifying their shapes; adopting a tree and studying it throughout the year; going on a treasure hunt to look for natural treasures; making a nest, feather and bird print collections; making an ant farm and carrying out research oriented activities, collecting snails and comparing the behavior of the captive snail with that of the wild snail.

ED 128 081

WINTER: UNIT MANUAL FIVE. CURRICULUM GUIDE. Janet Camp, et al. George Peabody College for Teachers. Nashville. 1972. 135 pp.

This is number five in a series of resource manuals consisting of 11 sequenced curriculum guides developed by the Demonstration and Research Center for Early Education (DARCEE) for use in early childhood education programs. Emphasis is placed on the development of sensory, abstracting and mediating, and response skills. The projected order of the units is: (1) All About Me, (2) Plants, (3) Autumn, (4) Home and Family, (5) Winter, (6) Forest Animals, (7) Neighborhood and Community, (8) Farm Animals, (9) Spring, (10) Transportation, (11) Farm Crops. Each unit is intended to build upon skills developed in preceding ones. The fifth unit, "Winter" is primarily a science unit. The major content objectives are to expand the child's understanding of people and plants and to increase awareness of environmental changes. The suggested time for the unit is three weeks. Instructional activities are presented side by side with basic skills to be developed. A list of instructional materials and their sources is given. Appendix includes patterns for teacher-made materials.

ED 132 007

YOUR NOSE KNOWS. Marie Meaney. Highline Public Schools. Seattle, WA. 1976. 18 pp.

This unit is designed for kindergarten pupils, but could be used effectively with primary pupils. The six lessons use the sense of smell to investigate various aspects of the earth, seasons, animals, and commercial use of fragrances. Each lesson includes the concept of the lesson, materials needed, procedure and evaluative activities.

ED 132 006

YOUR WORLD MY WORLD. Shirley Peace. Highline Public Schools. Seattle, WA. 1976. 61 pp.

This unit for kindergarten introduces the pupil to the concept of environment. Various aspects of the environment are explored through 14 lessons using our five senses. Each activity includes the concept of the lesson, materials needed, procedure, evaluation activities, and suggested additional activities. Also included are sheets for making overhead transparencies, resource lists, and background information. Materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 132 008

EXPLORATION WITH GARBAGE. Cherie Lund, et al. Highline Public Schools. Seattle, WA. 1976. 34 pp.

This unit is concerned with the topic of garbage. The eleven lessons explore what garbage is, problems of littering, ways to reduce garbage, and ways to use garbage. The materials were designed to be used with kindergarten pupils, but could be used effectively in lower elementary grades as well. Each lesson includes the concept of the lesson, materials needed, notes to the teacher, procedure, and evaluation activities. In addition, a number of extra activities are suggested. These materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 134 415

OUR ENVIRONMENT - A COLLECTION OF LESSONS. Barry C. Samuel Council on the Environment of New York City. New York. 1973. 72 pp.

The lessons in this publication present a concrete approach to the teaching of environmental science for grades 4 through 8. The ideas presented are geared for use in an urban setting. The material is structured so that it can be used as an entire unit or parts of it can be adapted for use with ongoing classroom activities. Twenty-seven lessons are included. Each activity includes suggestions for motivation, procedures to follow, questions to raise, and answers to many of the questions. Sketches for overhead transparencies are included for many of the lessons.

ED 081 609

TEACHER'S GUIDE, ECOLOGY, GRADE 4. Yadkin Valley Economic Development District, Inc. N.C. 1972. 132 pp.

This teacher's guide has been constructed to assist in development and implementing a life science course with an environment/ecological unit for Grade 4. Designed primarily for use with other science units, it offers numerous multidisciplinary activities which emphasize involvement in problem-solving through open-ended investigation rather than problem-doing only. Activity ideas range from a nature creep, plaster casting animal tracks, and making an ecological diorama to the study of community/government/industry relations, natural selection, and awareness; from language arts, activities, ecology and natural resources projects, and pollution control to consideration of wildlife, population growth, and conservation. Resource material compiled in the final section gives an annotated film list, a bibliography of books, and sources for free and inexpensive materials oriented to the fourth grade level.

ED 133 148

THIS LAND IS YOUR LAND. Lee Weber. Highline Public Schools. Seattle, WA. 1976. 34 pp.

The unit has been constructed for use by intermediate grade elementary school pupils. The seven lessons are designed to inform students about the land to develop a land ethic. The unit should be able to be completed in two to three weeks. The fifth lesson is a three hour field trip; the other lessons occur in the classroom and should take from one-half to one hour each.

ED 098 084

PRIMARY ENVIRONMENTAL EDUCATION PROJECT: TEACHER'S GUIDE AND MODULES 1, 2, AND 3. Everett T. Keach, et al. 1973. 383 pp.

The teacher's guide accompanies nine instructional modules on environmental education which are designed as supplementary material for a primary level social studies program. The modules focus on teaching/learning activities that will build on understanding of the interrelationships between man and the land, water, and air. A major objective is to have the students deal realistically with the environment. Emphasis is given to the thinking processes of young children and the provision for many opportunities to engage in creative thinking. Each instructional module (1) lists all required materials; (2) provides 10-15 learning experiences organized with a statement of content, required material, behavioral objectives, focusing questions, and overview; and (3) suggests supplementary experiences. The teacher's guide describes and illustrates teaching strategies based on three cognitive tasks--concept formation, interpretation of data, and application of principles--and on productive-divergent thinking behaviors. Additional suggestions for using the modules, a rationale for involving the community, and a final evaluation instrument are also included.

ED 132 022

AND THEN - RECYCLING. Dave Lewis. Highline Public Schools. Seattle, WA 1976. 33 pp.

There are seven concepts in this unit on recycling which is designed for grade five and six students. Each concept has one lesson that is comprised of several activities. Several suggested extra activities have been added to further the students' investigations and to enhance their understanding of glass and the problems related to glass. If all activities are used, the unit will take longer than three weeks. The materials were evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 133 147

PLEASE TOUCH ... TOUCHING IS LIVING - AND LIVING IS O.K.! Michael
Thorson, et al. Highline Public Schools, Seattle, Wa. 1976. 23 pp.

This unit is designed to direct intermediate grade pupils to positive attitudes and actions in the preservation of the environment. The culminating activity is the construction and placement of positive ecology signs. The goals of this unit are to: (1) foster positive ecological attitudes; (2) become involved in community action; and (3) use elementary construction methods and tools. The time suggested for the unit is three weeks.

ED 132 016

PRACTICE WHAT YOU PREACH! Judi Backman, et al. Highline Public
Schools. Seattle, WA. 1976. 36 pp.

This unit is designed to be used with intermediate grade elementary school pupils. The intent of the 10 lessons is to provide activities that create a positive inner environment for each child so that effectiveness in the immediate and global environment can be increased. There are no right or wrong responses; rather the measure of success is in attitudinal changes of students. The activities are not in a particular sequence; they can be presented in a condensed time period or spaced throughout the year.

ED 133 144

ECOLOGICAL SMORGASBORD: A BALANCED READING DIET. Sue Lorain, et al. Highline Public Schools. Seattle, WA. 1976. 40 pp.

This material was basically designed to be used as an individualized reading kit for the intermediate grade student. The books in this kit readily lend themselves to a supplementary reading program as part of a science unit. Depending on a teacher's needs, this kit can be used for a whole class or for selected individuals. For each of approximately 20 books there is a short summary of the book, some possible conference questions for the teacher, and some student activities.

ED 132 018

ENVIRONMENT. Billie Dorland. Highline Public Schools. Seattle, WA. 1976. 53 pp.

This unit, which focuses on environment and ecology, is designed for upper grade elementary school pupils. Since the five lessons were designed specifically for substitute teachers, each is completely self-contained. Each lesson is developed in four stages: (1) visual aids-colored posters; (2) development of an ecological concept; (3) relating the concept to a form of literature; and (4) culminating the experience with a creative art lesson.

ED 118 347

ENVIRONMENTAL EDUCATION IN THE ELEMENTARY SCHOOL. A SELECTION OF ARTICLES REPRINTED FROM SCIENCE AND CHILDREN. Sylvia K. Shugrue, Berenice Lameberton. National Science Teachers Association. Washington, DC. 1972. 50 pp.

Included in this document are a selection of articles reprinted from SCIENCE AND CHILDREN. They focus on environmental education in the elementary school, and present a number of environmental perspectives. Those concerning general or background information are: an examination of environmental education; children's attitudes about the environment; teaching resources in the national parks; and a school/community effort to preserve an urban environmental study area. Ecology is treated through investigations at the individal level, populations of one species, communities and ecosystems. Adapting traditional activities to an ecological approach, emphasizing concepts of interaction and change, is suggested. Earth science experiences to increase awareness of the child's own and natural environment center on site experiences. They focus on analyzing small parts of a larger environment--investigating change, age, movement, erosion, deposition, etc. The field trip is presented utilizing a conceptual approach to develop environmental relationships. Suggested activities for children for observing their town as a man-dominated biotic community are examining construction, tree identification, soil samples, zoo trips, food chains, and succession. A calendar for teaching conservation activities is constructed. One article is devoted to the associations between nature and creativity. References are included following some articles.

ED 133 146

ROUND AND ROUND IT GOES: A STUDY OF ECOLOGICAL CYCLES. Catherine Ross. Highline Public Schools. Seattle, WA. 1976. 52 pp.

This unit, designed for third- and fourth-grade students, emphasizes cycles and focuses on the water, oxygen, and nutrient cycles. The eleven lessons in this unit are designed to take one-half to one hour each. Use of the extra activities would increase the time for most lessons. Each lesson includes the concept of the lesson, materials needed, notes to the teacher, procedure, evaluative activities, and suggested additional activities. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 134 448

VALUING THE ENVIRONMENT, K-6. Charlotte-Mecklenburg Public Schools. Charlotte, N.C. 1975. 143 pp.

This guide was developed for use in grades K-6 as an enrichment program based on clarifying values. The program designed by teachers, aims to develop in the student a greater awareness and understanding of the community, themselves, and the earth. The program includes a number of environmental encounters. Topical themes lead teachers and students through main areas of awareness: Plants and Animals, Water, Air, Energy, Natural Resources, Land Use, and Aesthetics and Pollution. The conceptual schemes under each area of awareness increase in complexity according to the development level of the students. The activities in the encounters are action oriented, student-centered activities which provide "hands-on" learning experiences. Each encounter provides background information, behavioral objectives, activities, a resource reference listing, and value clarification strategies. Instructions for use of the value clarification strategies contained in the program are included.

ED 132 005

WATER. Jo Ellen McGrath. Highline Public Schools. Seattle, WA. 1976. 65 pp.

This unit on water is designed for primary grades. Included are ten lessons. Each lesson includes the concepts of the lesson, materials needed, time for the activity, procedure, evaluative activities, and follow-up activities. Included are suggested films, books, and worksheets. Materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 132 013

BIOTIC COMMUNITIES. Ruth Amoe, et al. Highline Public Schools. Seattle, WA. 1976. 55 pp.

This unit provides a number of activities to introduce students to ways of studying biotic communities, help them become good observers, and provide them with opportunities to use their skills. The materials include suggested activities, and forms to assist data collection. The materials are designed for use with upper elementary-junior high school students.

ED 113 148

ENVIRONMENTAL EDUCATION: PROBLEMS, PROJECTS AND EXERCISES, GRADES 4-10. North Carolina State Department of Public Instruction. Raleigh, Division of Science Education. February, 1972. 50 pp.

This sourcebook is an example of how environmental concepts can be introduced into various areas of the school curriculum. Included are a series of problems, projects, and exercises for students in grades four through ten. They are concerned primarily with pollution, population, individual needs, industrial needs, and consumption, on both a community and national scale. Each of the activities presents a particular problem, and students are asked to utilize their computational skills and/or suggest alternatives. The various problems and exercises aim to challenge students' problem-solving abilities in dealing with whole numbers, rational numbers, real numbers, percent and proportion, measurement, statistical measures, and graphs. Through generation of projects, students examine problems and suggest ways to improve environmental conditions.

ED 103 250

SOIL, AN ENVIRONMENTAL INVESTIGATION. Minesota Environmental Sciences Foundation, Inc. Minneapolis; National Wildlife Federation, Washington, DC. 1972. 21 pp.

This environmental unit is one of a series designed for integration within an existing curriculum. The unit is self-contained and requires an experience-oriented process that encourages self-paced independent student work. This particular unit investigates soil in relation to acidity, moisture, minerals, and organisms. Students in grades 2-9 can discover how these factors are interrelated and what effects they have on the soil through the activities included in the unit. Techniques for determining soil pH with litmus paper and presence of soil nitrates with test kits are included. Also, students make a sample of organisms in the soil with the help of a Berlese funnel. Each activity includes a list of the materials needed and where they can be found, background information, directions and questions for discussion.

ED 132 014

ECO-KIDS: EXPERIMENT WITH AIR ON SPACESHIP EARTH. Loretta Bell. Highline Public Schools. Seattle, WA. 1976. 77 pp.

The unit, designed for intermediate grades in the elementary schools, is concerned with the study of air, air pollution, effects of air pollution and ways of improving the quality of the air. Six lessons are included in the unit; most of the lessons contain activities that relate to a number of disciplines in addition to science. Background information, reference materials, and a film list are provided.

ED 133 149

IT'S ALL IN THE AIR. Jan Wright. Highline Public Schools. Seattle, WA. 1976. 21 pp.

The unit is designed for intermediate grade elementary school students. Emphasized in the units are air, the use of air, and air pollution. The seven lessons can be used consecutively or spaced throughout the year. Each lesson includes the concept of the lesson, materials needed, procedure, and evaluation activities. Some lessons include supplemental activities. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 133 150

...ABOUT THIS PROBLEM OF AIR POLLUTION... . Jan Wright. Highline Public Schools, Seattle, WA. 1976. 23 pp.

The lessons in this unit are designed to help students discover causes, effects, and results of air pollution through involvement in various activities; it is recommended for intermediate grade elementary school pupils. The unit can be used independently, but it is recommended for use with or following the unit entitled "It's All in the Air." The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 130 927

TEACHING ABOUT THE CHILD AND WORLD ENVIRONMENT: ELEMENTARY TEACHER'S KIT. Donald M. Morris. United Nations Children's Fund. New York, N.Y. United States Committee. 1976. 72 pp.

Three environmental education units relating environmental concerns to elementary school students' own experiences are described in this materials packet. Emphasis is on helping students become more sensitive to human and personal dimensions of environmental upset. Designed to teach children about themselves and their air, water, and land environments in an increasingly interdependent world, the units focus on natural disasters such as earthquakes, floods, weather upsets, pollution, and scarcity of natural resources. Each unit specifies objectives, materials, grade levels, and teaching procedures; supplies history briefs of related materials, defines terms where necessary; and provides a summary and footnotes. Activities include simulation of an earthquake and a simple watershed, class discussion of environment-oriented articles from the newspaper, cutting out natural objects from construction paper, testing for bacteria, making models of geographic areas, and listening as the teacher reads stories of natural disasters. Several articles which appeared in UNICEF News and a wall sheet that are part of this kit are available from the publisher but are not included on the microfiche.

ED 132 011

THE GAMES CITIES PLAY. Ruth Amoe. Highline Public Schools, Seattle, WA. 1976. 18 pp.

This is a simulation game and a part of the environmental education program developed by the Highline Public Schools. The game emphasizes why a city is formed, how it grows, where it develops, and some problems with which it must cope. It is designed to be used with elementary students in the intermediate grades. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 133 145

THOUGHTS FROM YOU. Liz Northrop. Highline Public Schools. Seattle, WA. 1976. 46 pp.

This unit is designed to assist sixth-grade students to increase their awareness and appreciation of their environment, and to develop their thinking and feelings concerning it by using creative writing.

It is recommended that the seven lessons be spaced over a time span of about four weeks. Each lesson includes the concept of the lesson, materials needed, notes to the teacher, procedure, evaluation activities and suggested additional activities. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 132 021

MIND-FULL OF ECOLOGY. Sue Horton. Highline Public Schools. Seattle, WA. 1976. 82 pp.

This ecology unit has been designed to be used an an individualized reading program, the duration of which is about three weeks. The purpose is to help intermediate grade elementary school pupils become more aware of their natural world and their responsiblility to it.

ED 134 400

HOW LONG DO MARINE ORGANISMS LIVE? INVESTIGATIONS IN THE MARINE ENVIRONMENT FOR CHILDREN. Richard M. Schlenker. 1976/ 6 pp.

This activity is designed to use a collection of marine bivalve shells. From these shells, students can determine approximate ages of the shells, compare weather conditions to shell ages, and learn problems of this technique.

ED 132 010

EARTH ART. Dick Dye. Highline Public Schools. Seattle, WA. 1976. 35 pp.

This unit for elementary school children is designed to help bring more art into the classroom and to help students become more aware of their environment. Included are six lessons and a bibliography of suggested student references. Each lesson outline includes the concept of the lesson, materials needed, notes to the teacher, procedure, evaluative activities, and suggestions for additional activities. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

All of the following documents are available from the DSU in either Hard Copy (HC) or available for two-week loan (L).

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ENVIRONMENTAL LEARNING EXPERIENCES FOR KINDERGARTEN THROUGH SECOND GRADE. Ohio Department of Education. 1973.

This collection of units is one of three volumes designed to assist teachers in bringing relevant, interdisciplinary environmental learning experiences to Ohio students, developed by the Center for the Development of Environmental Curriculum of the Willoughby-Eastlake City School District.

ENVIRONMENTAL LEARNING EXPERIENCES FOR GRADES THREE AND FOUR. Ohio Department of Education. 1973.

This collection of units is one of three volumes designed to assist teachers in bringing relevant interdisciplinary environmental learning experience to Ohio students, developed by the Center for the Development of Environmental Curriculum of the Willoughby-Eastlake City School District.

ENVIRONMENTAL LEARNING EXPERIENCES FOR GRADES FIVE AND SIX. Ohio Department of Education. 1973.

This collection of units is one of three volumes designed assist teachers in bringing relevant, interdisciplinary environmental learning experiences to Ohio elementary students, developed by the Center for the Development of Environmental Curriculum of the Willoughby-Eastlake City School District.

HUMANE EDUCATION GUIDE: TEACHING KINDNESS TO CHILDREN, KINDERGARTEN LEVEL. Henriette Howard. 1977.

Seven instructional guides in Humane Education. Each guide covers a particular grade level (K-6). Each guide is a self-contained unit, divided into 28 lesson plans, each of which has an objective stated, a list of materials needed, definition of terms, background information where necessary, the procedure to follow, a list of follow-up activities, and a short bibliography of films and books where appropriate. (Seven separate guides.)

PEOPLE AND THEIR ENVIRONMENT, TEACHER'S CURRICULUM GUIDE TO CONSERVATION EDUCATION, GRADES 1, 2, 3. Matthew J. Brennan, ed. 1972.

The first in a series of 8 curriculum guides developed by the South Carolina Department of Education, which suggests an approach to the teaching of conservation as an integral part of various subject matter areas at all levels of education.

AMERICA'S WILD HORSES: "FITTING 'EM IN." . . .AN ENVIRONMENTAL LEARNING PACKAGE - Teacher's Guide. Bureau of Land Management. U. S. Department of the Interior. Washington, DC 1977

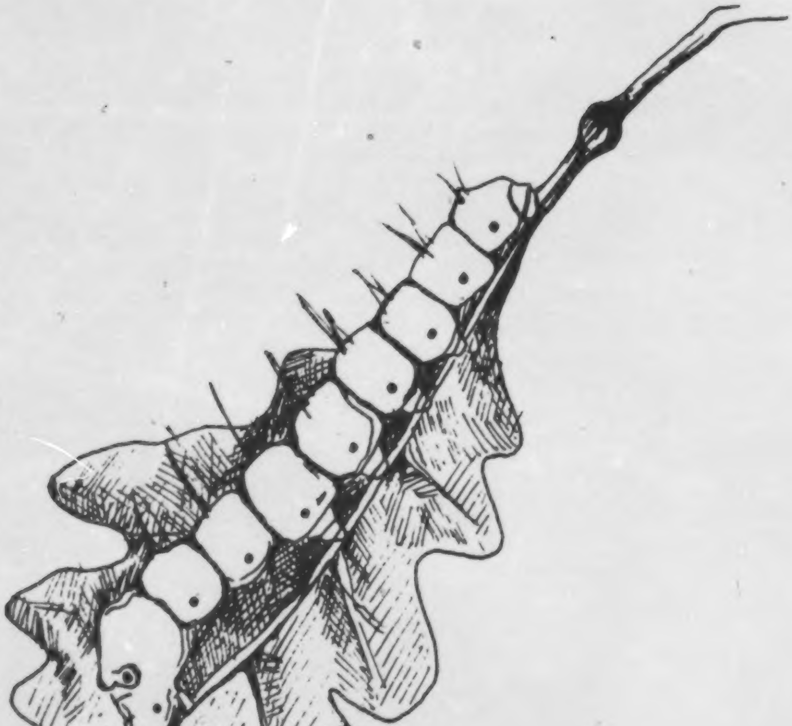
This package is designed to help educators, students and citizens alike increase their knowledge and understanding of the current and very interesting resource management issue that surrounds these animals. It includes lesson plans adaptable for one or more subjects in upper elementary and junior high levels. The packet is directed toward 6th and 7th graders.

WHOLE EARTH DESIGN. Indiana Department of Public Instruction. Indiana State Board of Health. 1976.

This interdisciplinary instructional design was developed to serve as an activity based program guide for developing in students and instructors, grades 4-12, the ability to observe, assimilate and interpret the world around them.

ENVIRONMENTAL AWARENESS FOR THE YOUNG CHILD. Clare Beaver. New Jersey State Department of Education. 1975.

A curriculum which defines various forms of pollution, their effects - both socially and physically - on the community and the individual. The sources of pollution, potential solutions, and the role of technology are also discussed. The units present activities and experiments on an inter-disciplinary level, integrating language arts, mathematics, nautical science, social studies and art into a thematic program.



SECONDARY

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ED 117 500

NATURAL RESOURCES MANAGEMENT: COURSE OF STUDY. Brain Ingvalson. Fridley Independent School District 14. Minnesota. August 1973. 48 pp.

This document presents a course outline for the study of natural resources management by junior and senior year high school students. Basic information and practical experiences are offered to the student in the classroom and through several field trips in order to acquire more knowledge in various areas of natural resources and their management. Unit plans for the following areas are presented: (1) white tailed deer and its management in Minnesota; (2) soils-conservation and utilization; (3) Minnesota lakes and rivers and its fishes; (4) Minnesota waterfowl; (5) mammals of Minnesota; (6) our total ecosystem; (7) parks and recreation; (8) maps, mapping, compass use, and land management; (9) aerial stereophotography and its use in natural resources management; (10) upland game bird management; (11) forestry management; (12) forest tree and wood identification; (13) taxidermy of a bird of mammal; (14) air and water pollution, and (15) introduction to Vocational Horticulture Club. Each unit includes the following information; unit objectives, unit outline; student activities (initiatory, developmental, and culminating); and source materials for the instructor and the student.

ED 125 931

CANALERS AND CONSERVATIONISTS: THE PROJECTED CROSS-FLORIDA CANAL. INSTRUCTIONAL ACTIVITIES SERIES IA/S-8. Edward A. Fernald. National Council for Geographic Education. 1975. 8 pp.

This activity is one of the series of 17 teacher-developed instructional activities for geography at the secondary-grade level. This activity investigates environmental quality employing the problem-solving techniques. Using a map which shows the proposed route of the cross-Florida barge canal as a focal point, the teacher leads a classroom discussion on the government's reasons for constructing the canal and draws from the students' hypotheses and/or problems regarding environmental change, land use and planning. The students then develop a model for testing their hypotheses. Students can compare their model with one provided in the materials, call Model for Solving Environmental Quality Problems. Using data from maps and charts, students discuss the general requirements for the canal and the cultural and physical changes which are likely to occur when the canal is built. A culminating evaluation activity involves students in a discussion of the use of models and maps in solving problems.

ED 099 236

RESOURCES UNIT, EDMONDS SCHOOL DISTRICT. Lynnwood, WA. 1974. 75 pp.

This interdisciplinary program, developed for secondary students, contains 13 natural resource activities that can either be used directly in, or as a supplement to, curriculum in Science, Photography, Mathematics, Social Studies and English. The topics to be investigated include: raindrop impact, resource control, recycling, the world model, elements, water retention, sharing the use of electricity, nuclear power plants, soil fertilizer and pH. Each learning activity includes: subject area and grade level for which it can be used, level VI objectives, time schedule for prelab performance of the activity, background information for the teacher and a listing of materials needed.

ED 132 025

THE ENVIRONMENTAL IMPACT OF ELECTRICAL POWER GENERATION: NUCLEAR AND FOSSIL. Pennsylvania State Department of Education, Harrisburg. 1975. 233 pp.

This text was written to accompany a course concerning the need, environmental costs, and benefits of electrical power generation. It was compiled and written by a committee drawn from educators, health physicists, members of industry and conservation groups, and environmental scientists. Topics include: the increasing need for electrical power, and current and proposed methods for meeting this need; nuclear power and fossil-fueled plants, their wastes, and health effects; considerations for choosing the site for a new power plant; energy conservation; and environmental effects of power generation. The appendices include a glossary of terms, a bibliography for further study, a decision-making model to help the reader and analyze the information received, and a brief outline of the procedure that must be followed by a utility in order to construct and operate a nuclear power plant.

ED 133 161

ARCHAEOLOGY/ECOLOGY. Kathie Muccilli. Highline Public Schools. Seattle, WA. 1976. 66 pp.

This unit was written for seventh-grade students in anthropology. The six lessons and suggested activities will take from 15 to 30 days to complete. Each lesson includes the concept of the lesson, materials needed, notes to the teacher, procedure, evaluative activities, and suggested additional activities. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 133 163

ANTHROPOLOGY - ECOLOGY. Margaret Skidmore. Highline Public Schools, Seattle, WA 1976. 36 pp.

The unit may be used as an introduction to the study of anthropology, the influence of ecology on the study of anthropology, and an introduction to the physical school environment. For best results, it should be used at the beginning of the school year. Lesson No. 1 can be completed by any teacher at any schools. Lessons No. 2 and 3 will have to be modified to fit your particular school surroundings, but all notes, preparations, and test patterns can be followed as they are included here by substituting your school map and particular school information. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 133 152

CONDUCTING ENVIRONMENTAL ASSESSMENT OF YOUR LOCAL COMMUNITY. Tom Files. Highline Public Schools, Seattle, WA. 1976 75 pp.

The unit is designed for use by junior high school social studies students. Emphasis of the unit is on planning and conducting an environmental assessment of your local community. The unit contains ten lessons as well as supplementary printed materials. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 101 944

EAST SYRACUSE MINOA SCHOOLS ENVIRONMENTAL EDUCATION MATERIALS. MIDDLE SCHOOL PACKAGE, MIDDLE SCHOOL CROSSOVER UNITS. East Syracuse. 1973. 160 pp.

This interdisciplinary series of five environmental education units is designed for teacher use at the middle school level. The two crossover units are designed to span a period of six to eight weeks at the beginning of the eighth grade. Each unit is developed around several organizing ideas or concepts; objectives, activities and strategies, materials, and expected outcomes are identified for each idea or concept. The first unit involves a social studies to science crossover and focuses on environmental aspects of the community. The science to social studies crossover unit takes a brief scientific look at the environment of a particular community. The Language Arts Skills unit focuses on research skills, pertinent to environmental investigations and communications such as outlining, editing, writing and indexing. The Mathematics Skills Unit, designed for wide ranges of ability, includes such activities as mapping, graphing, and data collection. Outdoor goals and activities, and evaluation criteria for outdoor education experiences plus guidelines for teaching relationships and environmental health and disease. Appendices are included with each unit.

ED 099 237

WATER QUALITY UNIT, EDMONDS SCHOOL DISTRICT. Lynnwood, WA. 1974. 130 pp.

This interdisciplinary program, developed for secondary students, contains 20 water quality activities that can either be used directly in, or as a supplement to, curriculum in Science, Home Economics and Industrial Arts, Mathematics, Health, English and Social Studies. The topics investigated include: pollution analysis, industrial need, waterborne diseases, supply and demand, quality prediction and analysis, stream volume and human need, and water conservation. Each learning activity includes: subject area and grade level for which it can be used, level VI objectives, estimated time to prepare for and perform the activity, background information for the teacher and a listing of materials needed. A list of audio-visual aids is included, where applicable, and a water pollution bibliography is attached.

ED 133 224

PRIORITY ONE: ENVIRONMENT. AIR POLLUTION AND YOUR HEALTH. Patricia McCutcheon et al. Union Township Board of Education, NJ. 1975. 28 pp.

This unit is one of a series of environmental education for grades 1-12. The unit is designed to be used with secondary school students and includes the following sections: (1) Seeing Issues as Human Values; (2) The Future of the Automobile; (3) Soot, Smog, and Smell: How Much Harm Can They Do; (4) Emission Control Devices for the Automobile; (5) Pollution Control for Industries and Power Plants; (6) Air Pollution Legislation; (7) The Clean Air Amendments Today; and (8) Schedule Sheet for the Unit References to audiovisual materials, worksheets, and activities are made; these materials are not included with this publication, but may be purchased. The materials have been validated as successful, cost-effective and exportable by the standards and the guidelines of the U. S. Office of Education.

ED 133 230

PRIORITY ONE: ENVIRONMENT. OPEN LANDS AND WILDLIFE. Clifford Knapp. Union Township Board of Education, N.J. 1975. 40 pp.

This unit is one of a series on environmental education for grades 1-12. The unit is designed to be used with secondary school students and includes the following sections: (1) Preface; (2) Dead or Alive; (3) Finding Out by Looking Closely; (4) Year in the Life of a Twin Fawn; (5) Ecology; (6) The Tools of Wildlife Management; (7) Land Use; (8) Helping a Threatened Population, A Model for Action; (9) Suggested Strategies for Action; (10) Appendices; and (11) Schedule Sheet for the Unit. References to audio-visual materials, worksheets, and activities are made; these materials are not included with this publication but may be purchased. The materials in this unit have been validated as successful, cost-effective, and exportable by the standards and guidelines of the U.S. Office of Education.

ED 133 231

PRIORITY ONE: ENVIRONMENT. OPEN LANDS AND WILDLIFE, TEACHER'S GUIDE. Clifford Knapp. Union Township Board of Education. N.J. 1975. 34 pp.

Material in this teaching guide includes: (1) an introduction to the unit; (2) a discussion of the sections of the unit; (3) instructional objectives; (4) suggestions for use of filmstrips, worksheets, reference materials, and activity cards; and (5) an outline of the unit. These materials have been validated as successful, cost-effective and exportable by the standards and guidelines of the U. S. Office of Education.

ED 133 226

PRIORITY ONE: ENVIRONMENT, PROTECTING OUR WATER SUPPLIES. John Colagrande, et al. Union Township Board of Education. NJ. 1975. 28 pp.

This unit is one of a series in environmental education for grades 1-12. The unit is designed to be used with secondary school students and includes the following sections: (1) Preface; (2) Riverview; (3) A Healthy Waterway; (4) An Unhealthy Waterway; (5) Cleanup Technology; (6) Effects of Certain Other Pollutants; (7) Lake Tahoe; (8) The Role of the Individual; and (9) Schedule Sheet for the Unit. References to audiovisual materials are not included with this publication but may be purchased. These materials have been validated as successful, cost-effective, and exportable by the standards and the guidelines of the U.S. Office of Education.

ED 101 945

EAST SYRACUSE-MINOA SCHOOLS ENVIRONMENTAL EDUCATION MATERIALS, HIGH SCHOOL PACKAGE. East Syracuse. 1973. 345 pp.

This series of four environmental education units is designed for use at the high school level. The first unit, an advanced science and independent study, includes such topics as student requirements, advisor responsibilities, evaluation forms, research report format, a guide to Syracuse University libraries, and research ideas. The second unit, an ecology course, explores biotic interrelationships, air quality, water quality, and other ecology-related problems. Course requirements, a course time table, terminal objectives for each area of study, activities, diagrams, worksheets, tables, and reference materials are included. An environmental biology unit, the third, unit, is a three-week unit which explores such topics as populations, communities, ecosystems, biomes, and biosphere. Worksheets, objectives, resources project suggestions which correlate course text and other curruculum materials are included in the unit. The final unit deals with environmental physics, exploring noise, air pollution, the automobile, the bicycle, aircraft, solid waste, and electric power. Each topic includes activities and/ or an information outline and discussion questions or topics.

ED 128 185

ECOLOGY (EARTH'S CYCLE OF LIFE: OPERATION GEOSPHERE STUDY). Rosemary C. Ferreira. 1976. 80 pp.

Presented is an environmental science interdisciplinary learning program designed for use on the junior high or senior high school level. It includes learning activities coordinated with behavioral objectives as well as an Ecology Game. The program is composed of seven modules, each of which deals with an element of the science of ecology. The modules are subdividied into sequences and units, each addressing specific ecological concepts. The instructional approach employed is founded on the use of process oriented learning activities built around cognitive, psychomotor and affective behavioral objectives. The learning activities include laboratory investigations, role playing, literature research, class field trips, as well as games.

ED 133 277

PRIORITY ONE: ENVIRONMENT, PROTECTING OUR WATER SUPPLIES, TEACHER'S GUIDE. John Colagrande, et al. Union Township Board of Education. NJ. 1975. 28 pp.

Materials for this teacher's guide includes: (1) an introduction to the unit; (2) a discussion of the sections of the unit; (3) instructional objectives; (4) suggestions on use of filmstrips, worksheets, reference materials, and activity cards; and (5) an outline of the unit. These materials have been validated as successful, cost-effective, and exportable by the standards and guidelines of the U.S. Office of Education.

ED 099 234

AIR POLLUTION UNIT. Edmonds School District. Lynnwood, WA. 1974. 96 pp.

This interdisciplinary program, developed for secondary students, contains 16 air pollution activities that can either be used directly in, or as a supplement to, curriculum in Science, Photography, Mathematics, English, Social Studies, Industrial Arts and Home Economics. The topics to be investigated include: pollutants from automobiles, exhaust collection, lead in lichens, sources of air pollution, the effect of air pollution on synthetics, solid particles, lead, sulfur dioxide and carbon monoxide analysis. Each learning activity includes: subject area and grade level for which it can be used, level VI objectives, time schedule for prelab and performance of the activity, background information for the teacher and a listing of materials needed. Where applicable, a listing of audiovisual aids is included and an air pollution bibliography is attached.

ED 133 160

AIR POLLUTION. WHAT YOU CAN & CAN'T SEE. Dennis W. Thompson. Highline Public Schools. Seattle, WA. 1976. 21 pp.

The unit on air pollution is designed for secondary school students in grades 7 through 12. There are five lessons in the unit; since some of the activities can take as long as 90 days, use of the materials needs to be carefully planned. Each lesson includes the concept of the lesson, materials needed, notes to the teacher, procedure, evaluative activities, and suggested additional activities.

ED 132 002

WATER. (PROJECT ECOLOGY ELE. Pak. TOULOUSE & EDGAR Pak.) Dick Toulouse, et al. Highline Public Schools. Seattle, WA. 1976. 58 pp.

This is one of a series of units for environmental education developed by the Highline Public Schools. This unit on water is designed for seventh-grade science classes. Included are 13 lessons. Each lesson usually includes the concept of the lesson, materials needed, notes to the teacher, procedure, and evaluation activities. In addition, there are materials for making overhead transparencies and quiz sheets. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 099 188

ENVIRONMENTAL STUDIES IN THE PHYSICAL SCIENCES. PROJECT REPORTS, VOLUME 3. THE RACHEL CARSON PROJECT. R. Thomas Tanner, Corvallis School District 509J. 1972. 77 pp.

This document is the third of seven accompanying volumes included in the Rachel Carson Project. The project attempts to introduce environmental education lessons and units into existing courses of study within a high school rather than to implement environmental education through the introduction of new courses. This volume reports the environmentally-related activities implemented in a physics and a chemistry program by two of the teachers involved in the project. The physics unit concentrates on a study of energy beginning with an introduction of the various forms of energy, i.e. kinetic,, potential, work, and heat. Next is an examination of the first law of thermodynamics and its application to steam engines and power sources. The unit concludes with an inquiry into the environmental impact of energy use. A bibliography of the texts and materials used is included. The chemistry unit consists of environmental projects in three areas: literature research, model building, and field research. It includes examples of book reports, an example of a student investigation of the water quality of streams in the area, and a student project involving the construction of an electrostatic precipitator.

ED 099 189

ENVIRONMENTAL STUDIES IN SEVERAL SCIENCE COURSES. PROJECT REPORTS, VOLUME 4. THE RACHEL CARSON PROJECT. R. Thomas Tanner. Corvallis School District 509J. 1972. 84 pp.

This document is the fourth of seven accompaning volumes included in the Rachel Carson Project. The project attempts to introduce environmental education lessons and units into existing courses of study within a high school curriculum ratherthan to implement environmental education through the introduction of new courses. This volume reports the environmental education activities implemented in the following four special science courses: Human ecology, science and society, marine biology, and natural history of Oregon. Course descriptions and objectives, possible topics for research, suggested lecture topics, field trips, annotated film lists, examples of student projects, tests, examples of student handouts, and bibliographies are among the instructional materials included in the report.

ED 133 151

OVERPOPULATION PRODUCES...WHAT ARE WE GOING TO DO ABOUT IT? Linda Edgar. Highline Public Schools. Seattle, WA. 1976. 63 pp.

These materials are designed for use with junior high school students studying the concept of population, population trends, and problems created by changes in populations. The seven concepts in the unit take about three weeks to complete. The materials are most easily adapted to science or geography classes. Each lesson includes the concept of the lesson, materials needed, probable time for the lesson, procedure, evaluative activity, and suggested extra activities. Materials for making ditto masters are included.

ED 125 927

YOU CAN'T SELL YOUR MOTHER: CONFLICT BETWEEN THE UNITED STATES GOVERNMENT AND THE SENECA NATION. INSTRUCTIONAL ACTIVITIES SERIES IA/S-4. Theodore Bond, et al. National Council for Geographic Education. 1975. 19 pp.

This activity is one of a series of 17 teacher-developed instructional activities for geography at the secondary level. The simulation investigates land-use conflict between the government and the Seneca Indian nation. Given data about a proposed dam project which would destroy an Indian reservation but protect recreation areas, railroad lines, and roads from flooding, students play roles of Indian leader, senators, journalists, and concerned citizens. The objectives of the exercise are to help students become aware of the complexities involved in land-use conflicts and to comprehend that the solutions are not always acceptable to all. In an inductive learning process, students read newspapers, listen to broadcasts, study maps, discuss their positions with other groups, and role-play. A debriefing, the key to the success in the simulation, follows the activity. The debriefing is designed to clarify for students the fact that the game's value is not in the resulting decision about construction of the dam but rather is the various skills developed, attitudes involved, learning processes used and content learned from the game. Detailed descriptions are given for each of the four to six classperiods that are needed to complete the activity. Included are instructions, roles, and quotes from Indian leaders, senators, journalists, and concerned citizens.

ED 134 449

VALUING THE ENVIRONMENT, 7-12. Charlotte-Mecklenburg Public Schools. Charlotte, NC. June, 1975. 139 pp.

This document is a pilot program of an interdisciplinary nature that complements the existing curriculum utilizing value clarification strategies. Included in this publication are a variety of value encounters. The value encounters are divided into four broad conceptual areas: (1) Environmental Management; (2) Environmental Quality; (3) Environmental Ecology; and (4) Sociocultural Environment. For each encounter, there is an introductory section, behavioral objectives, activities, values strategies, and a bibliography of useful resources. The activities are graded for applicability, grades 7-9, 10-12, or 7-12.

ED 081 611

TEACHER'S GUIDE, ECOLOGY, GRADE 10. Yadkin Valley Economic Development District, Inc., NC 1972. 124 pp.

This teacher's guide has been constructed to assist in development and implementing a life science course with an environment/ecological unit for Grade 10. Designed primarily for use with other science units, it offers numerous multidisciplinary activities which emphasize involvement in problem-solving through open-ended investigation rather than problem-doing, only . Activity ideas range from field investigations, on temperature and humidity, flying insects, trees, seed dispersal, and animal habitat to discussions of ecological succession at the community level; from a semester ecology project about ponds, data collection from soil studies and ecology and natural resources projects to analysis of the population explosion, bird and plant relationships, and conservation practices. Resource materials compiled in the final section gives an annotated film list and sources of free and inexpensive materials oriented to the tenth grade level.

ED 116 981

TEACHING ABOUT WORLD HUNGER. United Nations Children's Fund. United States Committee. New York, NY 1975. 63 pp.

This secondary-level resource unit surveys hunger and malnutrition in developing countries and the interdependent factors affecting world food supplies. The main part of the unit is divided into four sections which examine the historical and geographical, economic and political, health and nutritional, and environmental and ecological factors concerning the world food shortage. Suggested classroom activities and questions are provided for each section. Also in the unit are additional classroom activities and reading including a simulation game; comparison charts, an historical essay on hunger; a descriptive essay on the green revolution; protein conversions; world population data; a summary of the World Food Conference Resolutions; and an annotated list of related materials.

ED 132 028

THE GREAT SPRAY CAN DEBATE. Herb Bassow. Ohaus-NSTA Award-winning Paper. 1976. 50 pp.

This booklet, designed to be used in high school classrooms, concerns the technological economic, and political contexts of the fluorocarbon ozone depletion controversy. The curriculum is divided into three phases: the scientific dimension, which is a pure science analysis using lab-classroom tools and methodologies; the philosophical dimension, which deals with questions of truth, ethics, and legislative implications, and the career education dimension, which examines the variety of occupations and different areas of knowledge involved in resolving the controversy. A selected bibliography of reference materials is listed, and the appendices include magazine and newspaper articles concerning the controversy.

ED 099 186

MAN AND NATURE--A LITERATURE COURSE. PROJECT REPORTS, VOLUME I. THE RACHEL CARONS PROJECT. R. Thomas Tanner. Corvallis School District 509J, Oregon. 1972. 104 pp.

This document is the first of seven volumes included in the Rachel Carson Project. The project attempts to introduce environmental education lessons and units into existing courses of study within a high school rather than to implement environmental education through the introduction of new courses. This volume focuses on English literature by emphasizing the environment through Edward Abbey's DESERT SOLITAIRE. The unit concludes with examples of student reactions to the thoughts presented that specifically related to environmental ethics. The volume includes an introduction to the teacher; the DESERT SOLITAIRE unit; related poetry, essays, stories, contemporary music, and films; suggested appropriate field trips; an annotated bibliography of books about wildlife; and a summation by the teacher who tried the course.

ED 125 925

WHAT IS ALL THIS DAM FOOLISHNESS: INSTRUCTIONAL ACTIVITIES SERIES IA/-2. Erwin Bill. National Council for Geographic Education. 1975. 10 pp.

This activity is one of a series of 17 teacher-developed instructional activities for geography at the secondary grade level. This activity investigates the proposed construction of a dam. It employs a simulation technique in which students debate the conflicts that may evolve between groups with differing goals. To provide background information and to set the scene for the simulation, two short newspaper articles discuss crop yield increase due to irrigation and land value increases. A letter to the editor and an article opposing the building of the dam are also included. Eleven roles are presented for various special and nonspecial interest group members of the community who will be affected favorably or adversely by the building of the dam. These include farmers, representatives from a coal burning electric plant and land speculators and a fisherman. Each role discusses the position of one person toward building a dam and offers reasons for holding those positions. The issues are debated among the various interest groups and culminate in a special hearing. An environmental impact statement and a fact sheet, describing such things as the cost and advantages of the dam are presented. A map shows dam construction.

ED 132 013

BIOTIC COMMUNITIES. Ruth Amoe et al. Highline Public Schools, Seattle, WA 1976 55 pp.

This unit provides a number of activities to introduce students to ways of studying biotic communities, help them become good observers and provide them with opportunities to use their skills. The materials include suggested activities, and forms to assist data collection. The materials are designed for use with upper elementary-junior high school students.

ED 113 148

ENVIRONMENTAL EDUCATION: PROBLEMS, PROJECTS AND EXERCISES. GRADES 4-10.
North Carolina State Department of Public Instruction, Raleigh. 1972
50 pp.

This sourcebook is an example of how environmental concepts can be introduced into various areas of the school curriculum. Included are a series of problems, projects, and exercises for students in grades four through ten. They are concerned primarily with pollution, population, individual needs, industrial needs, and consumption, on both a community and national scale. Each of the activities presents a particular problem, and students are asked to utilize their computation skills and/or suggest alternatives. The various problems and exercises aim to challenge students' problem-solving abilities in dealing with whole numbers, rational numbers, real numbers, percent and proportion, measurement, statistical measures, and graphs. Through generation of projects, students examine problems and suggest ways to improve environmental conditions.

ED 103 250

SOIL, AN ENVIRONMENTAL INVESTIGATION. Minnesota Environmental Sciences
Foundation, Inc. National Wildlife Federation, Washington, DC 1972.
21 pp.

This environmental unit is one of a series designed for integration within an existing curriculum. The unit is self-contained and requires an experience-oriented process that encourages self-paced independent student work. This particular unit investigates soil in relation to acidity, moisture, minerals, and organisms. Students in grades 2-9 can discover how these factors are interrelated and what effects they have on the soil through the activities included in the unit. Techniques for determining soil pH with litmus paper and presence of soil nitrates with test kits are included. Also, students make a sample of organisms in the soil with the help of a Berlese funnel. Each activity includes a list of the materials needed and where they can be found, background information, directions and questions for discussion.

ED 132 026

THE ENVIRONMENTAL IMPACT OF ELECTRICAL POWER GENERATION: NUCLEAR AND
FOSSIL. TEACHER'S GUIDE. Pennsylvania State Department of Education,
Harrisburg. 1975. 29 pp.

This teacher's guide accompanies a course concerning the need, environmental costs, and benefits of electrical power generation. Each chapter of this guide corresponds to a chapter in the course text, and includes the following: a list of behavioral objectives for the corresponding chapter, a list of suggested activities, recommended audio-visual aids, and a list of reference materials. At the end of the teacher's guide is a decision-making model to help the reader analyze the information received. The appendices include laboratory safety rules for working with radioactive substances and an achievement test.

ED 099 192

ENVIRONMENTAL STUDIES: FIVE MISCELLANEOUS REPORTS. Project Reports, Volume V. The Rachel Carson Project. R. Thomas Tanner. Corvallis School District 509J. 1972. 52 pp.

This document is the last of seven volumes included in the Rachel Carson Project. The project attempts to introduce environmental educational lessons and units into existing courses of study within a high school curriculum rather than to implement environmental education through the introduction of new courses. Included in this volume is a report demonstrating methods by which environmental education can be implemented in a course on futuristics, an illustration of cooperation between a segment of the community (specifically a conservation organization) and a high school biology class which provides environmental learning experiences for both groups, an extracurricular project involving the study of a nearby creek as a potential spawning site for anadramous fishes, a proposal to utilize industrial waste material for projects in a high school industrial arts class, and a paper developed specifically for the project by an agricultural economist concerning the economics of environmental quality. Descriptions of the projects, lists of available resource materials, and suggested study outlines are among the contents of the various reports.

ED 132 003

CITIES THEN AND NOW, AND WHERE DO WE GO FROM HERE? Margaret Skidmore et al. Highline Public Schools, Seattle, WA 1976. 96 pp.

This unit on cities and urban life is designed for use with ninth-grade students, but could be used with other students. A variety of activities and materials for the activities are included. While some of the activities apply directly to Seattle, Washington, many could be used in any urban area. Each lesson usually includes the concept of the lesson, materials needed, notes to the teacher, procedures and evaluation activities.

ED 086 473

MAN AND ENVIRONMENT FOR SECONDARY SCHOOLS: A CURRICULUM IN ENVIRONMENTAL STUDIES FOR HIGH SCHOOLS. Robert H. McCabe. National Association for Environmental Education, Miami, FL. 1972. 96 pp.

This curriculum guide contains 20 modules for an integrated environmental study in the secondary schools. Each module, two to four pages in length, includes an overview, a list of concepts and a list of student objectives. In addition, an appendix has suggestions for initiating and implementing the program in the regular school curriculum. References and possible resources are given.

ED 133 154

EXPONENTIAL EXPLOSIONS! TODAY...TOMMORROW... Melanie Jensen. Highline Public Schools, Seattle, WA. 1976. 41 pp.

The unit is designed for junior high school mathematics classes and emphasizes applications of exponents to problems of population growth and pollution. The nine lessons are designed for about eleven school days. The materials were tried and evaluated; evaluation data may be obtained from the Highline Public Schools.

ED 133 225

PRIORITY ONE: ENVIRONMENT. AIR POLLUTION AND YOUR HEALTH, TEACHERS GUIDE. Patricia McCutcheon, et al. Union Township Board of Education. New Jersey. 1975. 28 pp.

THis teaching guide is designed to be used with secondary school students and the unit Air Pollution and Your Health. Material for the teacher includes the following: (1) an introduction to the unit; (2) a discussion of the sections of the unit; (3) instructional objectives; (4) suggestions for use of filmstrips, worksheets, reference materials and activity cards; and (5) an outline of the unit. These materials have been validated as successful, cost-effective, and exportable by the standards and guidelines of the U. S. Office of Education.

ED 133 158

NATURAL OR ORGANIC FOODS? Linda Schmidt. Highline Public Schools, Seattle, WA 1976. 36 pp.

The unit is designed for secondary students in home economics classes. The content of the units focuses on natural and organic foods, characteristics of the foods, and uses of the foods. The seven lessons in this unit are designed to last over a period of two to three weeks. The materials were tried and evaluated; evaluation data may be obtained from the Hihgline Public Schools.

ED 133 159

THE SKY IS FALLING: A STUDY OF PARTICULATES... . Dennis W. Thompson. Highline Public Schools, Seattle, WA 1976 23 pp.

Designed for secondary school science classes, the unit is concerned with particulate matter of air pollution. Five lessons are included. The lessons include construction of equipment and collecting data.

ED 125 930

ECONOMIC DEVELOPMENT: THE QUEST FOR MATERIAL WELL-BEING. INSTRUCTIONAL ACTIVITIES SERIES IA/S-7. Willis D. Veal. National Council for Geographic Education. 1975. 7 pp.

This activity is one of a series of 17 teacher-developed instructional activities for geography at the secondary-grade level. The activity investigates economic change in developing nations. It employs the dialogue approach. Given data about the Aswan High Dam in Egypt and about the environment of northeast Africa, students analyze the dam's contributions to the Egyptian economy and evaluate the societal and ecological problems that resulted from its construction. A chronological table of Aswan Dam developments, statistical data, a table of planned economic growth activity, and maps of Egypt and the Nile Conservation Works are provided.

ED 128 289

INTERDISCIPLINARY UNIT ON LAND USE AND SOCIAL ACTION IN PINELLAS COUNTY. 1976. Pinellas County District School Board, Clearwater, FL. 290 pp.

Interdisciplinary social studies units onland use and social action for eighth and ninth grade students, are provided. Although specifically written for students living in Pinellas County, Florida. The units can be adapted easily for teaching about land use in general and/or land use in one's own community. The overall objective is to help students look at what is happening in their community and clarify their values and lifestyle aspirations. Specific unit topics include the concept of land use, an historical view of land use and planning, beach development and natural disasters, trasnportation, zoning, water supplies distribution, wastes and population. Objectives, materials needed, and teaching methods are provided for each unit. Teaching strategies suggested are varied. Short readings and audiovisual presentations are followed by classroom discussions. Students write short stories, speeches, poems, and songs; make collages and travel posters; analyze graphs and tables; examine case studies; conduct interviews with community people; take field trips; and role-play community situations. Pre and posttests are also included.

ED 099 185

OPERATING MANUAL FOR RACHEL CARSON HIGH. THE RACHEL CARSON PROJECT. FINAL REPORT. R. Thomas Tanner. Corvallis School District 509J, Oregon. 1972. 35 pp.

This manual describes the Rachel Carson Project, an attempt to introduce environmental education lessons and units into the existing courses of study within a high school. The document provides a rationale for proceeding in this manner rather than implementing environmental education through the introduction of new courses. Included is a description and evaluation of the innovation process. The process as proposed centered around a core planning team of three teachers utilizing released time to develop materials that were then to be tried in their classes. This plan was modified to include informal, individual conferences between project staff and the entire teaching staff. The appendixes of this report include 22 descriptions by teachers and others, of lessons, unit plans, and other project activities.

ED 099 235

LAND USE UNIT, EDMONDS SCHOOLS DISTRICT. Lynnwood, WA. 1974. 125 pp.

This interdisciplinary program, developed for secondary students, contains 18 land use activities that can either be used directly in, or as a supplement to, curriculum in Science, Biology, Horticulture, Mathematics, Social Studies, English, Industrial Arts and Physical Education. The topics to be investigated include: land use simulation games, land use planning and decision making, small area plots, land use alternatives, microfilms, flood management and local population control. Each learning activity includes: subject area and grade level for which it can be used, level VI objectives, time schedule for prelab and performance of the activity, background information for the teacher and a listing of materials needed. A land use bibliography and a listing of audio-visual materials are included.

The following documents are available from the DSU in either Hard Copy (HC) or avaible for two-week loan (L).

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OCCUPATIONAL PREPARATION IN THE NATURAL RESOURCES: A SUGGESTED HIGH SCHOOL CURRICULUM GUIDE. Department of Agricultural Education, Pennsylvania State University , College Station. Pennsylvania. 1973.

This guide offers a sequentially-developed education program offering career awareness, career exploration, and job preparation.

PEOPLE AND THEIR ENVIRONMENT: TEACHER'S CURRICULUM GUIDE TO CONSERVATION, SOCIAL STUDIES, GRADES 7, 8, 9. Matthew J. Brennan, ed. J. G. Ferguson Publishing Company. Chicago, IL 1974.

The third in a series of 8 curriculum guides developed by the South Carolina Department of Education, which suggests an approach to the teaching of conservation as an integral part of various subject matter areas at all levels of education.

PEOPLE AND THEIR ENVIRONMENT. TEACHER'S CURRICULUM GUIDE TO CONSERVATION EDUCATION--SCIENCE, 7, 8, 9. Matthew J. Brennan, ed. J. G. Ferguson PUblishing Company, Chicago, IL. 1974

The fourth in a series of 8 curriculum guides developed by the South Carolina Department of Education, which suggests an approach to the teaching of conservation as an integral part of various subject matter areas at all levels of education.

PEOPLE AND THEIR ENVIRONMENT: TEACHER'S GUIDE TO CONSERVATION EDUCATION, HOME ECONOMICS, 9-12. Matthew J. Brennan, ed. J. G. Ferguson Publishing Company. Chicago, IL 1969.

The sixth in a series of eight curriculum guides developed by the South Carolina Department of Education, which suggests an approach to the teaching of conservation as an integral part of various subject matter areas at all levels of education.

PEOPLE AND THEIR ENVIRONMENT: TEACHER'S CURRICULUM GUIDE TO CONSERVATION EDUCATION, BIOLOGY. Matthew J. Brennan, ed. J. G. Ferguson Publishing Co., Chicago, IL 1972.

The eighth in a series of eight curriculum guides developed by the South Carolina Department of Education, which suggests an apporach to the teaching of conservation as an integral part of various subject matter areas at all levels.

SAMPLE ACTIVITIES FOR OPEN LEARNING EXPERIENCES IN ENVIRONMENTAL ISSUES, GRADES 1-6, and 7-12. Two Volumes. New Albany-Floyd County Consolidated School Cooperation. Indiana.

A group of activities developed by teachers designed to meet specific stated objectives which appear in the State Environment Guidelines of Indiana. Volume I deals with grades 1-6, Volume II, grades 7-12.

TERRESTRIAL ECOLOGY GUIDES: ST. ANSELM'S COLLEGE. Manchester Public Schools, New Hampshire.

An environmental studies guide which introduce several topics designed to enhance the study of terrestrial ecosystems with the hope that they will add greater perspective, increase clarity and make the studies more interesting, leading to inquiry, self-involvement, and independent study on the part of students.

THE WORLD POPULATION DILEMMA. Population Reference Bureau, Inc. 1972.

The third book in the series, it has been prepared for both high schooland college-level students. It is hoped that the factual explanation of human arithmetic and a balanced discussion of the dilemmas to which it leads will create an awareness of the population dimension of human affairs.

TOTAL ENVIRONMENT EDUCATION. Indiana Department of Public Instruction. 1975.

An interdisciplinary publication, directed towards teaching students to be concerned enough about their environment and to make rational decisions.

AMERICA'S WILD HORSES: "FITTING 'EM IN"...An Environmental Learning Package - Teacher's Guide, developed by the Bureau of Land Management. U.S. Department of the Interior. Washington, D.C. 1977. (L).

This package is designed to help educators, students and citizens alike increase their knowledge and understanding of the current and very interesting resource management issue that surrounds these animals. It includes lesson plans adaptable for one or more subjects in upper elementary and junior high levels. The packet is directed towards 6th and 7th graders.

WHOLE EARTH DESIGN. Indiana Department of Public Instruction. Indiana State Board of Health. 1976.

This interdisciplinary instructional design was developed to serve as an activity based program guide for developing in students and instructors, grades 4-12, the ability to observe, assimilate and interpret the world around them.

SUGGESTED ACTIVITIES FOR ENVIRONMENTAL EDUCATION IN THE SECONDARY SCHOOLS. Texas Education Agency, Austin. 1976.

A publication developed by public school and college educators as a model to assist middle and high school teachers in developing environmental education activities in all subject areas.

FORESTRY. A CURRICULUM GUIDE. Ed Curtis. Oklahoma State Department of Vocational and Technical Education. Stillwater. 1974. 455 pp.

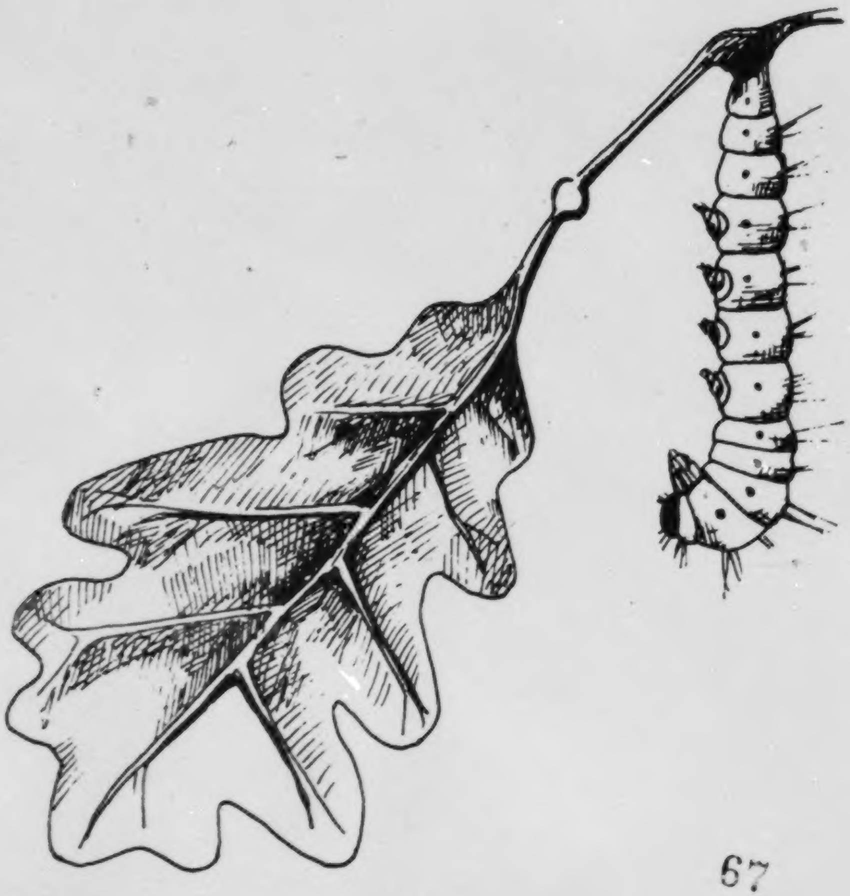
The curriculum guide was developed to prepare high school students for positions as forestry aides or for enrollment in higher education forestry programs. It provides a basic core of instruction in forestry in 20 instructional units grouped according to six areas. Orientation, Related Information, Forest Measurements, Forest Ecology and Silviculture, Forest Protection, and Forest Management. Each instructional unit includes behavioral objectives, suggested activities for student and teacher, information sheets, transparency masters, assignment sheets, job sheets, a test and test answers.

PEOPLE AND THEIR ENVIRONMENT: TEACHER'S GUIDE TO CONSERVATION EDUCATION, SOCIAL STUDIES, 10-11-12. Matthew J. Brennan, Editor. J. G. Ferguson Publishing Company. Chicago, IL. 1972.

The fifth in a series of eight curriculum guides developed by the South Carolina Department of Education, which suggests an approach to the teaching of conservation as an integral part of various subject matter areas at all levels of education.

"ENVIRONMENTAL EDUCATION CURRICULUM INFUSION UNITS FOR GRADES 7-12." New York State Department of Education. 1976.

The units in this manual were developed by teachers from five school districts in the State who participated in the Department's federally funded environmental resource materials project. The units represent examples of the application of the process which is described in Designing an Environmental Curriculum...A Process. Units included are: consumer education, language arts, environmental studies, fine arts health; industrial arts, mathematics, social studies, and general units.



K-12

K-12 PROGRAMS

ED 093 619

A CURRICULUM ACTIVITIES GUIDE TO BIRDS, BUGS, DOGS, AND WEATHER AND ENVIRONMENTAL STUDIES. Volume 5. 2nd Edition. John T. Hershey, et al, editors. Institute for Environmental Education. Cleveland, OH. 1973. 159 pp.

This material is one publication of a series of documents available from the Institute for Environmental Education (Cleveland) and consists of a curriculum activities guide to birds, bugs, dogs, and weather and environmental studies. The first edition of this material was prepared by the Documentation Task Force of Project KARE. Philadelphia, and was revised by personnel at the institute. The guide is intended for use by teachers and students until they feel sufficiently confident to prepare their own materials and is organized into three sections: Chapter 1 is on awareness activities, 2 on transitional activities, and 3 on operational activities. Awareness activities, developed with process skills in mind, are designed to orient students toward a concern for environmental problems and a realization that the problems are appropriate subjects for study. Transitional activities are directed toward real community concerns. Operational activities are integrated with community efforts to solve environmental problems. The guide's format is that of a questioning sequence, using questions to (1) lead to the activity, (2) initiate the activity, (3) continue the activity, (4) expand the activity, and (5) evaluate the activity. Teachers using the guide are invited to use only those activities that are most appropriate to their situation.

ED 083 004

A CURRICULUM ACTIVITIES GUIDE TO IN-DEPTH ENVIRONMENTAL STUDIES. John T. Hershey, et al, editors. Project KARE. Blue Bell, PA. 1973. 167 pp.

This guide is the fourth in a series of four books emphasizing student-oriented problem solving related to environmental matters. It utilizes a three-level activity approach; awareness, transitional, and operational. The intent is to provide investigations that will motivate students to pursue in-depth studies, thus encouraging them to generate ideas, design and carry through plans for action, make decisions regarding data collections, processing, evaluation, and utilization, and determine what potential impact these findings might have on community action.

ED 113 151

A HANDBOOK OF ENVIRONMENTAL ENCOUNTERS. Oregon State Department of Education. Salem, OR. 1973. 117 pp. (L)

This handbook has been designed as a teaching resource to be used in the development of student attitudes and competencies, reflecting an awareness of the environment, and a motivation to work toward solutions to its problems. Listed activities are to be adapted to the abilities and interests of students, school locale, and teaching situation. Suggested exercises consist of air, noise pollution, soil, rocks, minerals, ecosystems, trees, plants, marine and freshwater life, animals, population, energy, pesticides, land use, watershed management, private enterprise, student needs and perceptions, and solid waste. Each of the activities or encounters has objectives stated in behavioral terms. The rationale for each undertaking is identified, with needed materials and appropriate terminology. The environmental topics are divided into activities which call for some particular action on the part of students (i.e., observation, collection, identification, comparison, discussion, etc.). Appraisal activities are suggested for teachers to determine the extent of learning which has occurred. The encounters have been made as flexible as possible to give them the greatest utility. They are designed to be implemented in one or more of the curricular areas, and suggestions for integration are provided. Printed and audiovisual materials are also listed.

ED 125 888

ENVIRONMENTAL EDUCATION HANDBOOK FOR TEACHERS. Lance Bedwell. Illinois State Office of Education. Springfield. 1976. 101 pp.

In response to the interest in environmental education programs in the schools, the state of Illinois has planned this handbook as a guide for teachers desiring to develop an environmental curriculum or to expand an existing one. The guide presents a rationale for developing such a program, including current environmental education laws, and state plans. Six steps are given for organizing an environmental education program and curriculum guidelines to achieve this goal at all grade levels, K-12, are also given. In one section of the handbook, there are sample units covering topics listed in the guidelines and including all grade levels. Another section contains a listing of resources available to teachers developing environmental education programs. The handbook is designed to accomodate supplementary material when it is printed.

ED 093 648

A CURRICULUM ACTIVITIES GUIDE TO WATER POLLUTION EQUIPMENT AND ENVIRONMENTAL STUDIES. Volume 3. John T. Hershey, et al, eds. Institute for Environmental Education. Cleveland, OH. 1973. 130 pp.

The purpose of this guidebook is to present instructions for constructing low-cost instruments for environmental studies. The instruments discussed were either adopted or designed by students who were presented with the problem of producing low-cost environmental monitoring equipment. This book is a sequel to A Curriculum Activities Guide to Water Pollution and Environmental Studies, Volumes 1 and 2, but can be used independently of the guide. Information concerning the publication of the curriculum guide mentioned above is available in this document.

ED 123 095

ENVIRONMENTAL EDUCATION: A SOURCE BOOK FOR EDUCATORS. South Carolina State Department of Education. Alice D Linder. 1976 151 pp. (L)

This curriculum guide presents a plan to implement an environmental educational program. The main objective of the program is to develop environmental literacy including skills of inquiry, problem solving, managing, and communication, knowledge of environmental interrelationships, and positive attitudes and values toward environmental problems and their solutions. The program emphasizes interdisciplinary, student-centered activities. The guide begins by defining environmental education and its philosophy. A plan is outlined to develop the program: recognize a need, sell the idea, establish a committee, set goals, develop a plan, collect information, determine curricular changes, provide inservice education, pilot the project, support program, and evaluate and recycle. Program settings are discussed including the community, state and regional resources, and national sites. The major portion of the guide discusses curricular design encompassing teaching techniques, environmental literacy objectives, and strategies and approaches for curriculum change. Teaching strategies, recommended include a single discipline course, multidisciplinary course, minicourse, enrichment, and community action.

ED 125 883

AESTHETICS AND ENVIRONMENTAL EDUCATION. A MULTIDISCIPLINARY RESOURCE FOR CURRICULUM DEVELOPMENT. Wisconsin State Department of Public Instruction. 1976. 64 pp.

Educators have become increasingly aware of the complexity of most environmental problems. This realization has resulted in a recognition that scientific and technological solutions in themselves may be a major means for dealing with our environmental problems; but underlying nearly all environmental problems and solutions are human attitudes and behaviors which are a result of our society's ethics and values. Efforts to develop environmental education programs have called attention to the fact that aesthetic awareness and understanding should form the basis by which human beings interpret these ethics and values that influence behavior affecting environmental quality. The purpose of this publication is to provide a philosophic point of view on aesthetics and the environment and to serve as a resource for incorporation of environmental aesthetics learning experiences into any subject.

ED 123 034

EQUINOX. A MODEL FOR THE ENVIRONMENTAL EDUCATION CURRICULUM FOR KINDERGARTEN THROUGH GRADE TWELVE IN DELAWARE'S SCHOOLS. Thomas M. Baker, et al. State Department of Public Instruction. Dover. 1975. 88 pp.

This publication represents the state model for environmental education for kindergarten through grade twelve in Delaware's schools. The document defines environmental education, lists major curriculum objectives and guidelines, and stresses the importance of the interdisciplinary approach. Four model units, representing the grade level blocks K-3, 4-6, 7-9 and 10-12, have been expanded to demonstrate the conversion of objectives into a program of student learning experiences. Each expansion includes: global objectives, instructional objectives and suggested activities for the instructional objective. The model is organized around six major global objectives dealing with energy sources, earth resources, resource reclamation, population dynamics, interdependence and quality of life. Following each global objective is a series of instructional objectives for use in the development of local programs. For each instructional objective, the grade level and subject areas into which it may be infused have been suggested. A bibliography concludes this publication.

ED 103 196

A CURRICULUM ACTIVITIES GUIDE TO SOLID WASTES AND ENVIRONMENTAL STUDIES, Volume 4. John T. Hershey, et al, editors. Institute for Environmental Education. Cleveland, OH. 1973. 244 pp.

This document, developed for elementary and secondary students, is one of a series emphasizing student-oriented problem solving related to environmental matters. It is designed to guide others in initiating continuing or expanding their environmental education program. Volume 4 is intended for use by cadre who have used similar materials at a training workshop and is organized in two sections: Chapter 1 on awareness activities and Chapter 2 on transitional activities. Awareness activities are designed to orient students toward a concern for environmental problems and a realization that the problems are appropriate subjects for study. Process skills dealt with at the awareness level include observation of solid waste sources and components, categorizing of solid waste problems, comparisons, measurement, inferring and questioning. Transitional activities are directed toward real community concerns and involve the students in predicting, data collection, data processing, data evaluation, and formulation of hypotheses. Each activity identifies the situation and notes open-ended questions, equipment needed, procedure, past studies, limitations, and a bibliography. A bibliography and glossary are appended.

ED 133 223

PRIORITY ONE: ENVIRONMENT: FINAL REPORT ON THE PROJECT'S DEVELOPMENT AND EVALUATION, 1970-1975. Patricia McCutcheon Ed. Union Township Board of Education, NJ. 1975. 17 pp.

Described are the materials developed by Priority One: Environment, a project of the Township of Union Public Schools, Union, New Jersey. The program was designed to develop multidisciplinary and multimedia materials for grades 1-12. This publication describes the development process, the 13 multimedia units, the evaluation process, cost effectiveness data, and in-service required. The data indicates students studying the materials do significantly better on tests related to the program than control groups; kits last about four years; consumable costs are low; and in-service training needed to utilize the program is minimal.

ED 125 868

TEACHING ACTIVITIES IN ENVIRONMENTAL EDUCATION. VOLUME III - 1975. John H. Wheatley, et al. Information Analysis Center for Science. Columbus, Ohio. 1975. 195 pp. (L)

This volume is the third in a series of learning activities designed to supplement a K-12 curriculum. The activities are interdisciplinary in nature and include topics in science, mathematics, social studies, language arts, and fine arts. Besides a division of activities according to grade and subject matter, they are also grouped by environmental concepts that include the biophysical, sociocultural, management, and change; and by problem areas that concern aesthetics, health genetics, eco-community relationships, and psychological and behavioral considerations. Each activity includes a reference to the environmental education program from which it was taken, as well as a stated purpose and a methods section.

ED 125 862

ENVIRONMENTAL EDUCATION GUIDE K-12. Virginia State Department of Education. Richmond. 1974. 95 pp.

This educational program intends to promote a universal view of the environment through interdisciplinary, activity-centered experiences. The objectives identified are to help students examine environmental relationships, acquire problem-solving skills to analyze society's environmental problems, and develop civil responsibility and values. The guide gives suggestions and procedures for implementing the program. Most of the guide contains environmental investigations, for grades K-7 and 8-12. Each investigation lists goals and objectives, key questions and suggested procedures to answer the key questions. The processes used in the procedures are also listed. The appendix contains an annotated bibliography of environmental education readings.

ED 125 871

ENVIRONMENTAL EDUCATION HANDBOOK. Montana State Department of Public Instruction. Helena. 1972. 256 pp.

This handbook is designed to help educators develop an environmental curriculum for their school districts. An introduction to the publication suggests ways of using the handbook and states a philosophy of environmental education. Most of the remaining pages are devoted to 20 teaching cells, or units, on various grade levels, K-12. Each unit contains an introduction and some background information for the teacher, and an appropriate activity. The topics are primarily ecological and biological in nature. Organic gardening, populations, and field ecology are among the topics covered. Each unit is designed as a starting point for the teacher and can be expanded and developed to suit individual needs. Final sections of the handbook include a listing of environmental education programs in Montana, a bibliography, a listing of resource personnel and agencies, and a survey of environmental curricula.

ED 125 857

STUDENT IMPACT IN THE COGNITIVE AND AFFECTIVE DOMAINS: REPORT OF THE FIELD EVALUATION OF THE ENVIRONMENTAL CURRICULUM MATERIALS. Willoughby, Ohio. 1975. 226 pp.

This publication reports on the results of an evaluation program to determine the effect of an interdisciplinary, K-12 environmental curriculum. The objectives of the evaluation program were twofold. First, to develop and validate evaluative instruments which could measure the impact of the environmental curriculum materials on students. Both cognitive and affective instruments were developed corresponding to the levels of the curriculum design. Second, to measure the degree of impact the curriculum materials had on students from the twelve school districts involved in the program. This report discusses the degree to which these objectives were successfully attained. The evaluative instruments data and data analysis are presented at each level. The evaluation results indicate that the total curriculum package for grades K-12 provide the educator with a program with the potential of having a significant impact.

ED 106 054

SUGGESTED ACTIVITIES USING THE SCHOOL AND ITS SURROUNDINGS AS A RESOURCE FOR ENVIRONMENTAL EDUCATION. Group for Environmental Education. Philadelphia, PA 1972. 12 pp.

This collection of environmental education activities focuses on the school and its surroundings. The activities reinforce the concept that the immediate school environment contains elements that are common to the structure of the whole man-made environment. The activities provide ideas for using the school building, school grounds, and surrounding community for exploring, understanding, and communicating the various components of the man-made environment. The guide contains eight topics, such as "getting to school; People/Materials and Products; Land and Room Use; School Building/Schoolyard/Surrounding Community; Life Support Systems; and Parallels Between the Natural and Man-Made Environment. Under each topic is listed a number of corresponding activities. The activities represent an interdisciplinary approach to environmental education and include porblem-solving, discussion, photography, inquiry, and measurement.

The following documents are available from the DSU in either Hard Copy (HC) or for a two-week loan.

A DIRECTORY OF PUBLIC ELEMENTARY AND SECONDARY SCHOOL ENVIRONMENTAL EDUCATION PROGRAMS AND PROJECTS IN THE UNITED STATES. A. Paul Wishart. The University of Tennessee. Knoxville, TN 1975.

A listing of public schools programs and project directors/coordinators that can be utilized to facilitate the formation of a national communication and information delivery system among operational programs and projects.

ADVENTURE IN ENVIRONMENT. National Environmental Education Development. Silver Burdett Company. Morristown, NJ.

A National Park Foundation program produced with the cooperation of the National Park Service. Materials in the series include a paperback tesct, a teacher's guide to the text, and an outdoor book.

A REVIEW OF ENVIRONMENTAL EDUCATION FOR ELEMENTARY AND SECONDARY SCHOOL TEACHERS. Stanley L. Helgeson et al. ERIC/SMEAC. Ohio State University, Columbus. December 1971.

This report is the first of three volumes which inventories materials available to elementary and secondary teachers for environmental education; it includes the results of an information needs survey commissioned by U.S.O.E. and summaries of related research, selected program, materials and recommendations.

ENVIRONMENTAL EDUCATION IN THE URBAN SETTING: RATIONALE AND TEACHING ACTIVITIES. Herbert L. Coon et al. ERIC/SMEAC. Ohio State University, Columbus. 1976

Part I is a rationale developed to present a point of view about the opportunities for environmental education in Urban schools. Part II, Teaching Activities are ideas and suggestions for implementing such a program. The activities are designed for student use in grades K-12.

ALL AROUND YOU - AN ENVIRONMENTAL STUDY GUIDE. U.S. Department of the Interior. Bureau of Land Management. Colorado State Office. Denver Colorado.

An activities guide for teachers that begins in the classroom and moves outside to the schoolyard, the town, and natural or rural areas.

FROM THE EARTH TO YOUR TABLE: AN ACTIVITY MASTER PROGRAM ABOUT THE ECONOMICS OF FOOD. Office of Communication. U.S. Department of Agriculture.

These units of student activities attempt to broaden students' awareness. The activity masters are designed as a simple introduction to the economics of agriculture, food processing, and food distribution. When students have finished the activities they should have a better understanding of how their food gets to them, why it costs what it does, and how agriculture influences the American and the world economy.

THE DEVELOPMENT AND FIELD TESTING OF A PILOT PROGRAM IN ENVIRONMENTAL EDUCATION IN THE SEDRO-WOOLEY SCHOOL DISTRICT. John C. Miles. U.S. Department of HEW. Office of Education. December, 1971.

This is the final report on the Sedro-Wooley Project - an exploration of environmental education at the school district level. Aimed at development of curriculum and method in environmental education initiated through inservice teacher education, the goal is an integrated K-12 curriculum.

EXPLORING YOUR ENVIRONMENTAL CHOICES: AN INQUIRY AND DECISION MAKING APPROACH. Metropolitan Life Insurance Company. 1974.

A guide for the teacher/leader, which poses many environmental issues, identifies processes of decision-making, and suggests a wide range of viewpoints and trade-offs to be considered. The materials are not intended to be comprehensive, but rather to serve as a springboard for students and teachers to explore their own environmental choice.

SUMMARY BOOKLET ON A SUPPLEMENTAL PROGRAM IN ENVIRONMENTAL EDUCATION AND VALUES CLARIFICATION (PROJECT LEARNING TREE). The American Forest Institute, Inc. 1975.

The program is designed to assist students in developing the skills and acquiring the knowledge necessary to understand their relationship to the earth and its forest resources.

TEACHER'S GUIDE TO SCHOOL GARDENING. Vermont State Department of Education. 1976. (F)

This guide has been written to give teachers an educational perspective and general guidelines with which to develop gardening programs as part of their science and environmental education curriculum. It does not teach garden skills but supplies references to simple and inexpensive sources of gardening information. The basic plan for a home gardening program is outlined in detail.

TEACHING SOIL AND WATER CONSERVATION: A CLASSROOM AND FIELD GUIDE. U.S. Department of Agriculture. Soil Conservation Service. Revised. August, 1970.

As an aid to busy teachers, this publication gives some practical suggestions to help them in carrying out activities and observations in the classroom and out-of-doors. Each activity is presented in two parts: A how-to-do-it part and an interpretation. The how-to-do-it part is written in a language and style for presentation to students. The interpretations are addressed to teachers to give readily available background information.

THIS CROWDED WORLD: AN INTRODUCTION TO THE STUDY OF POPULATION. Lillian B. Frankel. Population Reference Bureau, Inc. 1970.

This book, the second in a series of three for primary and secondary school students, describes the "population explosion" which has engulfed the modern world.

THE SCHOOLS AND THE ENVIRONMENT: A REPORT OF A NATIONAL SEMINAR. The Institute for Development of Educational Activities, Inc.

A 32-page brochure summarizing the national seminar sponsored by I/D/E/A, on what can be done to teach students about pollution and the environment. It includes guidelines for schools to follow in developing K-12 environmental studies.

PEOPLE AND THEIR ENVIRONMENT: TEACHER'S CURRICULUM GUIDE TO CONSERVATION E UCATION. OUTDOOR LABORATORY, 1-12. Matthew J. Brennan, editor. J.G. Ferguson Publishing Company. Chicago, IL. 1973.

The seventh in a series of 8 curriculum guides developed by the South Carolina Department of Education, which suggests an approach to the teaching of conservation as an integral part of various subject matter areas at all levels of education.

PEOPLE!: AN INTRODUCTION TO THE STUDY OF POPULATION. Robert C. Cook and Jane Lecht. Population Reference Bureau, Inc. 1970.

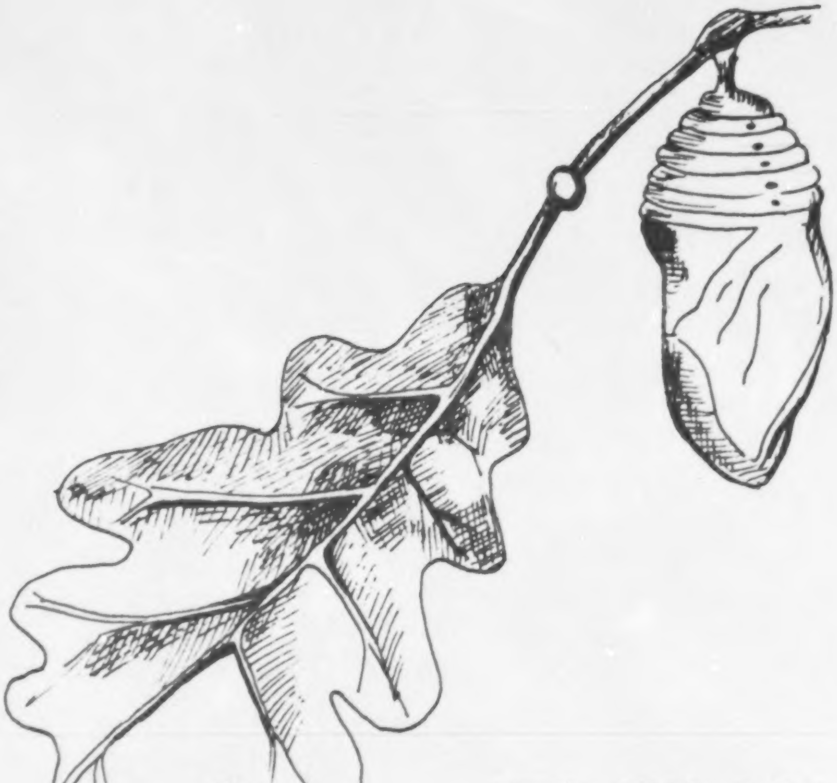
The first in a series of books for primary and secondary school students, this book tells about population; how it grows; what has brought about the "population explosion;" how it is affecting our own lives; how it could be controlled.

POPULATION EDUCATION FOR THE CLASSROOM. Selected and Developed by Judith M. Schultz, and Herbert L. Coon. ERIC Center for Science, Mathematics, and Environmental Education. Ohio State University. Columbus, Ohio. 43212. January, 1977.

This is one of a series of Environmental Education Reports issued to analyze and summarize information related to the teaching and learning of environmental education. The orientation of this publication has been primarily to assist teachers in incorporating Population Education approaches. The study includes a section on population education activities for: elementary level, elementary-junior high, elementary-junior-senior high, junior high, junior-senior high, and senior high school levels. It also includes a listing of resources, and a basic glossary.

ENVIRONMENTAL EDUCATION GAMES. Pennsylvania Department of Education. 1972.

A collection of environmental educational games developed for teachers' use in interdisciplinary classrooms in Pennsylvania schools.



JOURNAL ARTICLES

JOURNAL ARTICLES

Environment

"Interdisciplinary Environmental Education Courses: A Dream or Reality?" John Hug. SCHOOL SCIENCE AND MATHEMATICS. May/June 1977. pp. 397-401.

Author discusses a study done on teaching environmental education with an interdisciplinary team.

"Evaluation Strategies and Methodologies Utilized in Public School Environmental Education Programs and Projects--A Report From A National Study." Ronald B. Childress. SCHOOL SCIENCE AND MATHEMATICS. February 1977. pp. 105-116.

A study adapted from a doctoral disseration entitled "An Analysis of Environmental Education Programs and Project Curricula in Selected Public Elementary and Secondary Schools in the United States."

"Project LEAP: A New Approach to Teacher Education in Environmental Studies." Virginia Rowley-Rotunno. THE SOCIAL STUDIES. May/June 1976. pp. 132-135.

Describes and evaluates an environmental studies student teacher program, Project LEAP (Learning Environment, Achievement, and Performance), which is designed to emphasize action learning through selected field experiences of an interdisciplinary nature.

"Improvement Through Environmental Education: A School-Community Effort." Paul B. Hounshell et al. SCIENCE AND CHILDREN. April 1976. pp. 13-17.

Presents a science activity that can be organized and made functional in a willing community to include an array of unique environmentally-oriented occupations and an abundance of natural resources.

"KARE for the Environment." Michael L. Blim. AMERICAN EDUCATION. January/February 1976. pp. 23-28

Schools in five counties in southeastern Pennsylvania take their environmental problems seriously, as at least one planning board will attest.

"Outdoor Education: Environmental Immersion for Oklahoma Teachers." Don Kellogg et al. THE SCIENCE TEACHER. May 1975. pp. 46-48.

Describes a summer workshop, funded by the National Science Foundation, to train elementary teachers in Oklahoma to serve as leaders in implementing modern elementary school science curriculum programs.

"A Developmental Framework for Planning Environmental Education Programs." Joseph R. Kelly et al. SCIENCE AND CHILDREN. April 1975. pp. 14-17.

Presents a framework to help schools make environmental education integrated. The framework is also designed to help teachers decide if and what activities would be appropriate for their classes and to show how decisions can be made which relate environmental education within and across grades.

"Let's Begin With the Real World." Martha Irwin et al. CHILDHOOD EDUCATION. February 1975. pp. 187-189.

Here are one hundred and one ways to encourage children's curious minds through the environment!

"Environment--Debate as a Way to Teach Environmental Issues." Paul E. Conner. THE SCIENCE TEACHER. January 1975. pp. 49-50.

Debate appears to be a successful device for presenting environmental issues. Provides for student interest, involvement, opportunity for decision making and it demands that the students form defensible positions.

All of the following articles are from the JOURNAL OF ENVIRONMENTAL EDUCATION.

"Essential Curriculum Components in Environmental Education." Charles E. Kupchella et al. Apring, 1977. pp. 11-16.

It is vital that we give continuing attention to the effectiveness of environmental education, keeping in mind that its objective is to provide students with the tools necessary to understand the environmental problems they will face in the real world.

"A Self-Instructional Approach to Environmental Decision Making: Focus on Land Use." Harry O. Haakonsen et al. Spring, 1977. pp. 17-25.

Describes L.U.K. (Land Use Decision Making Kit), the project exposes adults and secondary students to educational materials concerning the general concepts of land use decision making.

"Involving Teachers in Environmental Education." William C. Ritz. Spring, 1977. pp. 40-47.

Article describes several designs and the general content of two inservice courses which have been established through the Environmental Studies Institute of Syracuse University.

"Humanism and Environmental Education." John C. Miles. Spring, 1976. pp. 2-10.

Author advocates the exploration of humanism as a fundamental goal of environmental education.

"Nature Centers, Environmental Attitudes, and Objectives." Robert Holtz. Spring 1976. pp. 34-37.

Author discusses effectiveness of nature centers.

A Critique of Behavior Objectives Methodology in Environmental Education."
Thomas B. Colwell, Jr. Spring 1976. pp. 66-71.

Author discusses the weakness of behavioral objectives in environmental education as the manner in which goals are presented and entertained in the learning sequence.

"A Total Curricular Approach to Environmental Education." Jerry L. Links. Winter 1975. pp. 11-20.

Of all the recommendations for environmental education being offered in current literature, perhaps the most recurring is the call for interdisciplinary curricular structures.

"Population-Environment Education." Judith M. Schultz. Fall 1975. pp. 46-52.

A plea to combine the affective and cognitive domains.

"Classroom Environmental Value Clarification." William Lamb. Summer 1975. pp. 14-17.

The possible applications of value clarification and science fiction seem limitless and should be considered by all teachers involved with environmental education.

"The Environmental-Ecological Web." W. R. Zeitler. Winter 1974. pp. 53-56.

Describes activities for children in which they become actively engaged with reality of the total environment beyond a school building.

"A Methodology for Environmental Education." Stanley I. Cummings. Winter 1974. pp. 16-20.

Emphasis is upon methodology which is better able to capture the imagination and encourage unity in a rapidly changing field. A methodology based upon decision making is nominated as worthwhile.

"Indoor or Outdoor Environmental Education?" Thomas Richard Howie. Winter 1974. pp. 32-36.

Compares the effectiveness of field experience versus classroom experience in cognitive learning.

"Basic Guidelines for Environmental Education." Thomas J. Rillo. Fall 1974. pp. 52-55.

Several basic guidelines need to be examined and adopted if a program of environmental education is to be successful.

"Assessing Students' Awareness of Environmental Problems." Rodney L. Doran et al. Summer 1974. pp. 14-18.

Developing a diagnostic instrument.

"Simulation, Gaming, and Conventional Instruction in the Teaching of Ecology." Gail M. Fennessey et al. Summer 1974. pp. 21-24.

The effectiveness of a simulation exercise, a simulation game, and conventional instruction at the elementary and junior high school levels are compared in this article.

"Developing Student Attitudes Toward Environmental Protection." David L. Howell et al. Summer 1974. pp. 29-30.

The effect of a student manual in secondary school instruction.

"Conceptual and Instructional Issues in Environmental Education Today." R. Thomas Tanner. Summer 1974. pp. 48-53.

The issues identified here apply to the precollege public school curriculum.

BIBLIOGRAPHIES

BIBLIOGRAPHIES

ED 093 763

AIDS TO ENVIRONMENTAL EDUCATION: PRESCHOOL - GRADE 3; GRADES 4-6; UPDATE I. June 1974. Margaret McDaniel. Massachusetts Audubon Society. 1974. 69 pp.

This annotated bibliography of environmental education materials for preschool through grade 6 is intended for teachers and librarians. Most materials cited were published from 1970-72, although a few date from the 1960's. The bibliography has two main sections; (1) preschool-grade 3, and (2) grades 4-6. A third and last section, an update of materials published from 1973-74, cites additional materials not included in the main section. Within each section materials are listed by author under the following categories: (1) bibliographies; (2) books for students; (3) books for teachers; activity guides; (4) curriculum materials; (5) filmstrips; (6) graphics; and (7) magazines. Prices are included for magazine subscriptions. Publisher's addresses are also provided.

ED 134 397

ENVIRONMENTAL CONSERVATION EDUCATION. A SELECTED ANNOTATED BIBLIOGRAPHY, 1975 SUPPLEMENT. Conservation Education Association, Billings, MT 1975. 32 pp.

This is a supplement to ENVIRONMENTAL CONSERVATION EDUCATION, A SELECTED ANNOTATED BIBLIOGRAPHY published in 1974. Publishers of books were invited to submit recent publications for review; those listed are the committee's choices as the best of those received. Materials are listed for the following levels: (1) Primary (Early Childhood through Grade 3); (2) Upper Elementary (Grades 4-6); (3) Junior High (Grades 7-9); (4) Senior High (Grades 10-12); (5) College; and (6) General Reading. Within each level, the materials are listed under content readings. Each reference has usual bibliographic information and a brief annotation A publisher's directory and an index to authors are also included.

ED 118 306 (L)

OUTDOOR EDUCATION, A SELECTED BIBLIOGRAPHY (WITH ERIC ABSTRACTS). ERIC/CRESS SUPPLEMENT NO. 5. New Mexico State University. University Park. ERIC Clearinghouse on Rural Education and Small Schools. March, 1976. 199 pp.

A supplement to 5 previous bibliographies, this bibliography provides access to some of the latest resource material, research findings, and/or developments in outdoor education. Part I contains 143 citations and abstracts which appeared in "Resources in Education" (RIE,) from the January 1975 issue through the December, 1975 issue. Part II includes 61 citations of journal articles which appeared in "Current Index to Journals in Education" (CIJE) from the January, 1975 issue through the December, 1975 issue. In addition to outdoor education, the citations cover such topics as conservation education, educational programs, emotionally disturbed, environmental education, natural resources, nature centers, learning activities, science education, and urban environment. Types of materials cited include curriculum guides, research reports, resource guides, instructional materials, program descriptions, and teaching guides. A combined RIE and CIJE subject index is provided to assist the user in locating citations pertaining to a given subject area within the realm of outdoor education.

ED 125 978

POPULATION EDUCATION: A SELECTIVE ANNOTATED BIBLIOGRAPHY FOR UNITED STATES SCHOOLS. REVISED. Population Council, New York. 1976. 17 pp.

This selective annotated bibliography provides teachers, students, and curricula designers with population resources. All the resources have been reviewed for quality, accessibility, and diversity of opinion. The bibliography is divided into four sections on (1) basic reference data for the study of population; (2) specific population education materials; (3) opinionated works about population problems; and (4) information about the United Nations World Population Conference. The Population Tribune, and The International Youth Population Conference, all held in August 1974 in Bucharest, Romania. Besides the regular bibliographic information, each listing includes, whenever possible, an ordering address, number of pages, paperback or hard cover, cost, recommended educational level, Library of Congress card number, International Standard Book Number and U.S. Government Printing Office stock number.

ED 125 864

ENVIRONMENTAL EDUCATION: AN ANNOTATED BIBLIOGRAPHY OF SELECTED MATERIALS AND SERVICES AVAILABLE. Alice Cummings, et al. National Education Association, Washington, DC. 1975. 25 pp.

In response to increasing demands for more information on environmental education materials, the National Education Association (NEA) has released a restructured, enlarged, and more complete bibliography and directory as a tool for students and teachers for use in environmental education programs. Materials are classified in the following categories: periodicals, organizations, publishing companies, United States government departments, directories and bibliographies, and films. Each category is introduced with a few directions and suggestions for its use. There is a short description of each resource including the correspondence address and, in most cases, the price.

The following documents are available from the DSU in either Hard Copy(HC) or available for two-week loan (L).

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ENVIRONMENTAL CONSERVATION EDUCATION: A SELECTED ANNOTATED BIBLIOGRAPHY. Compiled for the Conservation Education. 1976

This bibliography is a second supplement to ENVIRONMENTAL CONSERVATION: A SELECTED ANNOTATED BIBLIOGRAPHY. It includes an alphabetical listing.

The following organizations and government agencies will send bibliographies of their publications:

AMERICAN ENTERPRISE INSTITUTE
1150 Seventeenth Street, N.W.
Washington, DC 20036
202/296-5616

AMERICAN FOREST INSTITUTE***
1619 Massachusetts Avenue, N.W.
Washington, DC 20036
202/667-7807

CENTER FOR NATURAL AREAS
1525 New Hampshire Avenue, N.W.
Washington, DC 20036
202/265-0066

CENTER FOR SCIENCE IN THE PUBLIC INTEREST
1779 Church Street, N.W.
Washington, DC 20036
202/332-6000

CITIZENS' ADVISORY COMMITTEE ON ENVIRONMENTAL QUALITY
1770 Pennsylvania Avenue, N.W.
Washington, DC 20006
202/223-3040

COUNCIL ON ENVIRONMENTAL QUALITY
722 Jackson Place, N.W.
Washington, DC 20006
202/382-1425

ENVIRONMENTAL POLICY CENTER
324 C Street, S.E.
Washington, DC 20003
202/544-8200

FRIENDS OF THE EARTH
620 C Street, S.E.
Washington, DC 20003
202/543-4312

FEDERAL ENERGY ADMINISTRATION
Room 220, Old Post Office Building
Eleventh and Pennsylvania Avenue, N.W.
Washington, DC 20461
202/961-6061

*Taken from: CHALLENGES FOR APPALACHIA ENERGY, ENVIRONMENT AND NATURAL RESOURCES. A handbook of reference materials prepared by the Staff of The Appalachian Regional Commission. October 1976. pp. 553-570. Reprinted with permission.

INTERNATIONAL INSTITUTE FOR ENVIRONMENTAL AFFAIRS
1525 New Hampshire Avenue, N.W.
Washington, DC 20036
202/462-0900

IZAAK WALTON LEAGUE OF AMERICA
1800 North Kent Street
Arlington, VA 22209
703/528-1818

NATIONAL AUDUBON SOCIETY***
1511 K Street, N.W.
Washington, DC 20005
202/833-3892

NATIONAL PARKS AND CONSERVATION ASSOCIATION
1701 Eighteenth Street, N.W.
Washington, DC 20003
202/265-2717

NATIONAL PLANNING ASSOCIATION
1606 New Hampshire Avenue, N.W.
Washington, DC 20009
202/265-7685

NATIONAL RECREATION AND PARK ASSOCIATION
1601 North Kent Street
Arlington, VA 22209
703/525-0606

NATIONAL SCIENCE TEACHERS ASSOCIATION
1742 Connecticut Avenue, N.W.
Washington, DC 20009
202/265-4150

NATIONAL WATERWAYS CONFERENCE, INC.
1130 Seventeenth Street, N.W.
Washington, DC 20036
202/638-0090

NATIONAL WILDLIFE FEDERATION***
1412 Sixteenth Street, N.W.
Washington, DC 20036
202/483-1550

NATURAL RESOURCES DEFENSE COUNCIL
917 Fifteenth Street, N.W.
Washington, DC 20005
202/737-5000

RESOURCES OF THE FUTURE
1755 Massachusetts Avenue
Washington, DC 20036
202/462-4400

SOCIETY OF AMERICAN FORESTERS
5400 Grosvenor Lane
Bethesda, MD 20036
301/296-7820

TENNESSEE VALLEY AUTHORITY
Fifteenth and H Streets, N.W.
Washington, DC 20444
202/343-4537

UNITED STATES PARK SERVICE***
(Division of Interpretation)
Main Interior Building
Washington, DC 20009
202/343-2128

URBAN ENVIRONMENT CONFERENCE
1714 Massachusetts Avenue
Washington, DC 20036
202/462-0660

WILDERNESS SOCIETY***
1901 Pennsylvania Avenue, N.W.
Washington, DC 20036
202/293-2732

WILDLIFE MANAGEMENT INSTITUTE
1000 Vermont Avenue, N.W.
Washington, DC 20005
202/347-1174

***These organizations/government agencies will send lists of films that may be obtained by free loan or rental.

CURRENT, CLASSIC AND CHOICE*
Recommended Reading

PRIMARILY ABOUT ENVIRONMENT:

ANNUAL REPORT (for latest year available) of the Council on Environmental Quality. Available from the Council at 722 Jackson Place, N.W., Washington, DC 20006 Free.

THE CLOSING CIRCLE: NATURE, MAN AND TECHNOLOGY by Barry Commoner. Alfred A. Knopf, Inc. Order Department, 457 Hahn Road, Westminster, MD 21157, 1971. $6.95. Paperback available from: Bantam Books, Inc., 666 Fifth Avenue, New York, NY 10019, 1972. $1.95.

ECOLOGY: THE MAN-MADE PLANET. Kaiser News, 1970. (Five copies may be ordered- 50¢ each from: Kaiser News, 300 Lakeside Drive, Oakland, CA 94643.)

LIVING IN THE ENVIRONMENT: CONCEPTS, PROBLEMS, AND ALTERNATIVES. G. Tyler Miller, Jr. Wadsworth Publishing Company, Inc., Belmont, CA 94002, 1972. $2.95.

MAN AND ENVIRONMENT. Robert McCabe & R. F. Mines eds. Prentice-Hall International, Inc., Englewood Cliffs, NJ 07632. (V. I-1973 $5.40; V. II-1974 $5.95)

MAN'S RESPONSIBILITY FOR NATURE: ECOLOGICAL PROBLEMS AND WESTERN TRADITION. John Passmore. Charels Scribner's Sons, Shipping and Service Center, Vreeland Avenue, Totowa, NJ 07512, 1974. $7.95.

A SAND COUNTY ALMANAC. Aldo Leopold. Oxford University Press, Inc., 1600 Pollitt Drive, Fair Lawn, NJ 07410, 1966. $7.95.

SHOULD TRESS HAVE STANDING? TOWARD LEGAL RIGHTS FOR NATURAL OBJECTS. Christopher Stone. William Kaufmann, Inc., One First Street, Los Altos, CA 94022, 1974. $2.95.

SO HUMAN AN ANIMAL. Renee Dubois. Charles Scribner's Sons, Shipping and Serivce Center, Vreeland Avenue, Totowa, NJ 07512, 1968. $2.45.

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*Taken from: CHALLENGES FOR APPALACHIA ENERGY, ENVIRONMENT AND NATURAL RESOURCES. A handbook of reference materials prepared by the Staff of The Appalachian Regional Commission. October 1976. pp. 553-570. Reprinted with permission.

RESOURCES

OTHER INFORMATION SOURCES

U. S. GOVERNMENT AGENCIES

Executive Departments:

AGRICULTURE, U. S. DEPARTMENT OF
Fourteenth Street and Jefferson Drive, S.W.
Washington, DC 20250
202/447-5247

Agricultural Research Service: (202/447-4433)

Conducts research in watershed engineering, soil management, water management and air pollution control.

Agricultural Stabilization and Conservation: (202/447-6221)

Administers the following nationwide or regional programs: Rural Environmental Conservation Program, Cropland Adjustment Program, Public Access Program, Water Bank Program, Forestry Incentives Program, Appalachian Land Stabilization and Conservation Program and various commodity, annual set-aside, and price stabilization programs, including feed grains, wheat, cotton, rice, wool.

Cooperative State Research Service: (202/447-6504)

Administers federal grant funds for research in agriculture, forestry, resource conservation and rural life made available to State Agricultural Experiment Stations and Forestry Schools in 50 states, Puerto Rico, Guam and the Virgin Islands.

Extension Service: (202/447-6283)

A part of the Cooperative Extension Service. Has the responsibility for and leadership in all general educational programs of the Department of Agriculture. County extension agents, located in nearly all counties make available the results of research conducted by the Department of Agriculture, land grant institutions and other research agencies. Results include information on the protection of wildlife and other natural resources and the action necessary to provide such protection.

Forest Service: (202/447-3957)

Administers the National Forests and National Grasslands and is responsible for the management of their resources. Cooperates with Federal and state officials in the enforcement of game laws in the national forests and in the development and maintenance of wildlife resources. Also cooperates with the states and private owners in the application of sound forest management practices, in the protection of forest lands against fire and in the distribution of planting stock. Conducts research in the entire field of forestry and wildland management.

Plant Protection and Quarantine Division (202/436-8795)
5026 Herzel Place, Beltsville, MD 20705

Protection Division: Federal-state cooperative program which encompasses survey and detection of introduced plant pests. Also includes the enforcement of domestic plant quarantines (such as those against the gypsy moth and the Japanese beetle) designed to limit the spread of introduced plant pests.

Quarantine Division: prevents the introduction of foreign plant pests into the U. S. Corollary mission to certify U. S. produce to meet plant quarantine import requirements of foreign countries.

Soil Conservation Service: (202/447-4543)

Provides resource data for and technical assistance in soil and water conservation to land users in rural and urbanizing areas. Helps finance small watershed projects to help communities with flood protection, water management and supply, recreation and improvement of wildlife habitat.

COMMERCE, U. S. DEPARTMENT OF
Fourteenth Street between Constitution Avenue and E Street
Washington, DC 20230
202/783-9200

Economic Development Administration: (202/967-5113)

Conducts programs to help create permanent jobs in economically lagging areas. Provides public works grants and loans, business loans and planning and technical assistance in areas with high unemployment or low median family income.

National Marine Fisheries Service: (202/343-4993)
3300 Whitehaven Parkway, Washington, DC 20240

A component of the National Oceanic And Atmospheric Administration. Promotes the protection and rational use of living marine resources for their aesthetic, economic and recreational value to the American people. Administers programs to: determine how living marine resources are affected by the naturally varying services to foster the efficient international management, use and protection of living marine resources

National Oceanic and Atmospheric Administration: (202/967-8243)

Administers programs to improve man's comprehension and uses of the physical environment and its oceanic life. Components of NOAA are: National Ocean Survey; National Marine Fisheries Service; National Weather Service; Environmental Data Service; National Environmental Satellite Service; Environmental Research Laboratories; Office of Coastal Zone Management; Office of Sea Grant.

Office of Coastal Zone Management: (301/496-8491)
11400 Rockville Pike, Rockville, MD 20852

A component of the National Oceanic and Atmospheric Administration. Serves as a focal point for coordination with and advice to state and local governments, regional organizations and public and private institutions involved in coastal zone management.

Office of Sea Grant: (202/967-3854)
Address same as above.

A component of the National Oceanic and Atmospheric Administration. Administers and directs the National Sea Grant Program, which: provides support for marine research and development, educationa and advisory service programs; sponsors education of engineers, technicians and other specialists at selected colleges and universities.

DEFENSE, U. S. DEPARTMENT OF
The Pentagon
Washington, DC 20301
202/695-5030

Responsible for the safety of the U. S. through establishment of integrated military policies and procedures relating to national security. Significant programs to abate pollution and enhance the environment have been promulgated and are monitored by the Department of Defense.

HEALTH, EDUCATION AND WELFARE, U. S. DEPARTMENT OF
330 Independence Avenue, S.W.
Washington, DC 20201
202/245-1850

Food and Drug Administration: (301/443-3285)
5600 Fishers Lane, Rockville, MD 20852

Protects the health of American consumers by enforcing Federal laws requiring that: foods must be safe, pure and wholesome; drugs and therapeutic devices must be safe and effective; cosmetics must be harmless; household products and toys must be safe; and all these products must be honestly and informatively labeled and packaged.

U. S. Office of Education: (202/245-9231)
Division of Technology and Environmental Education

HOUSING AND URBAN DEVELOPMENT, U.S. DEPARTMENT OF
Office of Environmental Standards: (202/755-5980)
451 Seventh Street, S.W.
Washington, DC 20410

INTERIOR, U. S. DEPARTMENT OF THE
Interior Building
C Street between 18th and 19th, N.W.
Washington, DC 20240
202/343-1100

Bureau of Land Management: (202/343-5717)

Administers the public domain lands, which are located primarily in the western states and which amount to about 60 percent of all Federally owned lands. Public domain lands and resources are managed under multiple-use principles to provide outdoor recreation, fish and wildlife production, livestock grazing, timber, industrial development, watershed protection and mineral production, including that on the Outer Continental Shelf.

Bureau of Mines: (202/343-1100)

Conducts programs of inquiry and regulation to stimulate the private sector in production of minerals and fuels to supply an appropriate and substantial share of the nation's needs in a manner consonant with the public interest. Performs research, provides information to the government and the public and conducts programs pertinent to the extraction, processing, use, reuse and disposal of minerals and mineral fuels. Enforces Federal laws and regulations dealing with minerals and mineral fuels.

Bureau of Outdoor Recreation: (202/343-5726)

Administers the Land and Water Conservation Fund, which (1) provides matching grants for state acquisition and development of outdoor recreation areas, and (2) funds acquisition of new Federal recreation areas and national parks. Evaluates surplus Federal real property for possible recreational use; where suitable, the property is conveyed to state and local governments under the President's Legacy of Parks program. Is the Federal focal point for outdoor recreation research, technical assistance and program coordination. Assists with environmental impact statements relative to land-use policies, water pollution and transportation systems.

Bureau of Reclamation: (202/343-4662)

In the western states, administers the Federal program of water resource development and use to provide multiple-use projects that furnish: fish and wildlife protection; recreational opportunities; water for farm irrigation; municipal and industrial use; hydroelectric power; flood control; and other natural resource conservation benefits.

Geological Survey, U. S.: (703/860-7000)
National Center, Reston, VA 22092

Publishes and distributes maps and reports covering our nation's physical features and its mineral, fuel and water resources. Responsibilities include activities in topographic mapping, geology, water resources and conservation.

Mining Enforcement and Safety Administration: (202/343-4249)

Administers the Federal Metal and Nonmetallic Mine Safety Act and (except for certain provisions relating to research) the Federal Coal Mine Health and Safety Act. Develops related standards and carries on training programs.

National Park Service: (202/343-6843)

Administers parks, monuments and other sites that have national significance because of their recreational, historic and natural values.

Office of Water Research and Technology: (202/343-5975)

Develops solutions to urgent water-related problems by means of basic and applied research and development of technology. Such activities are carried out through grants and contracts with universities, private firms and others, and include the provision of annual support to a water research institute located at one university in each state. Also operates a Water Resources Scientific Information Center.

United States Fish and Wildlife Service: 202/343-5634

Aids in conservation of the nation's migratory birds, certain mammals and sport fishes.

LABOR, U. S. DEPARTMENT OF
Constitution Avenue and 14th Street, N.W.
Washington, DC 20210

Job Corps: (202/376-6995)
Manpower Administration, 601 D Street, N.W., Washington, DC

Eatablished by the Economic Opportunity Act of 1964. Operates Civilian Conservation Centers, which are located primarily in rural areas and operated for the Department of Labor by Federal and state conservation agencies. The programs of work experience, training and remedial education are focused upon activities to (1) conserve, develop or manage public resources or recreational areas, or (2) assist in developing community projects.

Operation Mainstream and Senior Community Service Employment Program: (202/376-6093)

Provides work experience and training programs for older adults, primarily those past 55 years of age. Program gives them work experience while employed by nonprofit or public agencies. Much of the work is beautification and conservation in rural areas.

STATE, U. S. DEPARTMENT OF
Washington, DC 20520

Bureau of Oceans and International Environmental and Scientific Affairs: 202/632-9312.

A new bureau which brings together the department's activities and responsibilities relating to all international scientific, technological and environmental affiars (including weather, the ocean, atmosphere, outer space, fisheries, wildlife conservation, health and population).

OTHER GOVERNMENT AGENCIES

Council on Environmental Quality and Citizens' Advisory Committee on Environmental Quality.
The Council on Environmental Quality
722 Jackson Place, N.W.
Washington, DC 20006
202/382-1415

Assists and advises the President in the preparation of the annual Environmental Quality Report; gathers information concerning conditions and trends in the quality of the environment; reviews and appraises programs of the Federal government; develops and recommends national policies to promote the improvement of environmental quality.

The Citizens' Advisory Committee on Environmental Quality.
(Same Address as on previous page)

Advises the President and the Council on matters relating to environmental quality.

Energy Research and Development Administration
20 Massachusetts Avenue, N.W.
Washington, DC 20545
202/973-3335

Has a broad charter to develop new and improved energy sources and utilization technologies consistent with sound environmental and safety practices.

ENVIRONMENTAL PROTECTION AGENCY
401 M. Street, S.W.
Washington, DC 20460
202/755-0700

Charged with mounting a coordinated attack on the environmental problems of air and water pollution, solid waste management, pesticides, radiation and noise. Functions of some 15 programs include: setting and enforcing environmental standards; conducting research on the causes, effects and control of environmental problems; assisting states and local governments.

FEDERAL ENERGY ADMINISTRATION
Federal Building
Twelfth and Pennsylvania Avenue, N.W.
Washington, DC 20461
202/961-6003

Established by the Federal Energy Administration Act of 1974 to insure (1) that the supply of available energy continues to meet total national needs, and (2) that, in the event of an energy shortage, priority needs will be met and the burden of the shortage will be borne equitably. Implements policies to increase domestic production of energy and promotes adoption of conservation practices.

FEDERAL POWER COMMISSION
825 North Capitol Street, N.E.
Washington, DC 20426
202/386-6102

Created by the Federal Water Power Act of 1920, now Part I of the Federal Power Act. Regulates the interstate aspects of the electric power and natural gas industries. Administers a system of licensing non-federal hydroelectric developments to assure their compatibility with comprehensive basin plans for all beneficial purposes, including recreation. Reviews plans of water development projects of federal construction agencies, with the principal objective of safeguarding the hydroelectric power potential.

FEDERAL WORKING GROUP ON PEST MANAGEMENT
Room 501E, Waterside Mall
401 MStreet, S.W.
Washington, DC 20460
202/755-8294

Provides daily coordination of pest management activities by Federal agencies. Develops programs and policy proposals. Working group includes panels on pesticide monitoring, research, information, program review, safety and categorication and training review. Responsible to Council on Environmental Quality.

GENERAL SERVICES ADMINISTRATION
Eighteenth and F Streets, N.W.
Washington, DC 20405
202/343-1100

Concerned with the conveyance of surplus real property for wildlife conservation purposes. According to Public Law 537, such property may be conveyed to the Secretary of Interior or to a state.

NUCLEAR REGULATORY COMMISSION
1717 H Street, N.W.
Washington, DC 20555
310/492-7771

Established in January 1975 to license and regulate civilian nuclear facilities to assure that nuclear power is used to produce electricity or for other commercial purposes, with proper safeguards for the environment and public health and safety.

SMITHSONIAN INSTITUTION
1000 Jefferson Drive, S.W.
Washington, DC 20560
202/628-4422

A Federally chartered nonprofit corporation established in 1846 for the "increase and diffusion of knowledge among men." Mission accomplished by: field investigations; development of the national collections in natural history and anthropology and their preservation for study, reference and exhibition; scientific research and publications; programs of national and international cooperative research, conservation, education nd training; answering inquiries from the general public and from educational and scientific organizations.

TENNESSEE VALLEY AUTHORITY
New Sprankle Building
Knoxville, TE 37902
615/637-2587

Concerned with the development of the natural resources within the Tennessee Valley basin. Dam and reservoir system regulates the Tennessee River and major tributaries for flood control, navigation, power production and other purposes. Related activities include development of fish and wildlife, outdoor recreation, water and air pollution control and reservoir ecology. Land Between the Lakes is being developed as a major demonstration project for outdoor recration, conservation education and protection of wildlife.

WATER RESOURCES COUNCIL
2120 L Street, N.W.
Washington, DC 20037
202/254-6303

Encourages the conservation, development and utilization of water and related land resources on a comprehensive and coordinated basis by Federal, state and local government and private enterprise.

CONGRESSIONAL COMMITTEES

Senate

Committee on Agriculture and Forestry: 202/225-2035
Room 324
Old Senate Office Building
Washington, DC 20510

Concerned with: inspection of livestock and meat products; animal industry; insect pests; protection of birds and animals; forestry; dairy industry; plants and soil; stabilization of prices of agricultural products.

Committee on Commerce: 202/225-5115
Room 5202
New Senate Office Building
Washington, DC 20510

Concerned with (1) interstate and foreign commerce, and (2) fisheries and wildlife, including research, restoration, refuges and conservation.

Committee on Interior and Insular Affairs; 202/225-4971
Room 3106
New Senate Office Building
Washington, DC 20510

Concerned with the following aspects of public lands: mineral resources; forest reserves and national parks; preservation of ruins; irrigation and reclamation; geological survey; mining schools; and Indian affairs.

Committee on Public Works: 202/225-6176
Room 4204
New Senate Office Building
Washington, DC 20510

Concerns include: flood control and improvement of rivers and harbors; public buildings; public reservations and parks within the District of Columbia; road maintenance; air pollution control; and disaster relief.

HOUSE OF REPRESENTATIVES

Committee on Agriculture: 202/225-2171
Room 1301
Longworth House Office Building
Washington, DC 20515

Concerns are the same as those of the corresponding committee in the U. S. Senate.

Committee on Interior and Insular Affairs: 202/225-2761
Room 1324
Longworth House Office Building
Washington, DC 20515

Same as U. S. Senate Committee

Committee on Interstate and Foreign Commerce; 202/225-2927
Room 2125
Rayburn House Office Building
Washington, DC 20515

Same as U. S. Senate Committee

Committee on Merchant Marine and Fisheries: 202/225-4047
Room 1334
Longworth House Office Building
Washington, DC 20515

Merchant marine concerns include the registering and licensing of vessels and small boats and the coast and geodetic surveys. Fisheries and wildlife concerns include research, restoration, refuges and conservation.

Committee on Public Works: 202/225-4472
Room 2165
Rayburn House Office Building
Washington, DC 20515

Same as U. S. Senate Committee

PERIODICALS THAT DEAL CHIEFLY WITH ENVIRONMENTAL PROBLEMS AND RESEARCH*

AIR AND WATER NEWS. 801-7 New Center Building, Detroit, MI 48202

A weekly report concerning environmental pollution and its relationship to the law, the market, and technology. Very expensive.

AIR/WATER POLLUTION REPORT. Business Publications, Box 1067, Blair Station, Silver Spring, MD 20910

A weekly newsletter on waste disposal, soil pollution, desalination, noise, and conservation. Very expensive.

ARCHIVES OF ENVIRONMENTAL HEALTH. Heldref Publications, 4000 Albermarle Street, N.W. Washington, DC 20016

Scholarly presentation for the professional in environmental health a good research tool for those in allied fields as well. (Monthly)

ATMOSPHERIC ENVIRONMENT. Pergamon Press Limited, Headington Hill Hall, Oxford OX3 OBW, England.

Papers dealing with all aspects of air pollution research, such as emission control. pollutant transport, crop spraying, and industrial aero-dynamics are featured. (Monthly)

CATALYST FOR ENVIRONMENTAL QUALITY. 274 Madison Avenue, New York, NY 10016.

A popular treatment of all aspects of the environment. Includes reviews of books and films useful in environmental education. (Quarterly)

COMPOST SCIENCE: THE JOURNAL OF WASTE RECYCLING. 33 E. Minor Street, Emmause, PA 18049.

This publication provides scientific and practical information concerning the converson of municipal, agricultural, and industrial wastes into useful products. (Bimonthly)

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*Taken from: "The Environmental Press" by James and Eileen Metress, THE JOURNAL OF ENVIRONMENTAL EDUCATION, Spring, 1976 (Volume 7, Number 3). Reprinted with permission.

THE CONSERVATION FOUNDATION LETTER. 1717 Massachusetts Avenue, N.W., Washington, DC 20036

Contains up-to-date news on environmental issues, including federal budget appropriations, legislative action, land use, water, soil, noise pollution, etc. (Monthly)

CONSERVATION NEWS. National Wildlife Federation. 1412 16th Street, N.W. Washington, DC 20036.

Presents current coverage of recent and pending federal legislation regarding conservation. Junior high to adult level. (Semimonthly).

DESIGN AND ENVIRONMENT. RC Publications, 19 West 44 Street, New York, NY 10036

A journal devoted to a consideration of the interaction between technology and environment with emphasis on how the interaction can be made constructive. (Quarterly).

ECOLOGICAL ABSTRACTS. Geo Abstracts, Ltd., University of East Anglia, Norwich, Nr4, TTJ, England.

An abstracting service that publishes abstracts of original contributions to the literature in all fields of ecology. The sections dealing with applied ecology are of particular relevance to environmentalists. (Bimonthly with an annual index).

ECOLOGICAL MONOGRAPHS, Duke University Press. Box 6697. Durham, NC 27708.

A very scholarly publication that presents research papers dealing with all aspects of ecology and the development of ecological theory. Along with ECOLOGY, it is an official organ of the Ecological Society of America; it differs from ECOLOGY in that it concentrates on longer research papers of twenty pages or more. Technical. (Quarterly)

THE ECOLOGIST. Molesworth Street, Waderbridge-Cornwall, England.

A montly magazine featuring ecological articles ranging in scope from primitive man in the modern world, to wildlife and resource management and public health. Printed on recycled paper. (Monthly)

ECOLOGY. Duke University Press. Durham, NC 27708

A companion to ECOLOGICAL MONOGRAPHS from the Ecological Society of America. Stresses research on basic problems of any orgamism in relation to its environment and concentrates on papers of less than 20 pages. Quite technical. (Bimonthly)

EKISTICS. Athens Center for Ekistics, 24 Strat Syndesmou Street, Athens, 36, Greece.

A periodical dealing with the problems and planning of human settlements for the future. (Monthly)

ENVIRONMENT. Scientist's Institute for Public Information. 560 Trinity Avenue, St. Louis, MO 63130

Publishes current articles and news concerning the effect of technology on the environment. An excellent popular magazine to keep one abreast of the information explosion in environmental science. (10 times/year)

ENVIRONMENTAL ACTION. Room 731, 1346 Connecticut Avenue, NW
Washington, DC 20036

A periodical put out by Environmental Action, Inc., a political lobby formed to focus attention on the environmental crisis. Presents all aspects of ongoing environmental controversies. (Biweekly)

ENVIRONMENTAL ACTION BULLETIN. 33 East Minor Street, Emmaus, PA 18449

A grassroots-type publication that provides valuable information on the latest developments in the field and tips on how and where to take the fight to protect the environment. should be read with some reserve. (Biweekly)

ENVIRONMENTAL AFFAIRS. The Environmental Law Center, Boston College Law School, Brighton, MA 02135

A multidisciplinary journal attempting to expose environmental degradation to all in a belief that scholarly isolation of such affairs will end in disaster. (Quarterly)

ENVIRONMENTAL EDUCATION REPORT. Environmental Educators, Inc. 1621 Connecticut Avenue, N.W., Washington, DC 20009

A publication dealing with the various components of environmental education. Features articles, book reviews, film reviews, congressional updates, international news, granting sources, and a calendar of coming events related to environmental education. (Monthly)

ENVIRONMENTAL INFORMATION ACCESS, Environmental Center, Inc. 124 East 39 Street, New York

A comprehensive compilation of environmental abstracts. An expensive but basic bibliographic tool. (Biweekly)

ENVIRONMENTAL POLLUTION. Applied Science Publ. Ltd. Ripple Road, Barking, Essex, England.

Deals with biological effects of pollution control and with the international, economic, and political aspects of pollution problems. (Quarterly)

ENVIRONMENTAL RESEARCH. Academic Press, Inc. 111 Fifth Avenue, New York, NY. 10003

An international journal of environmental medicine and environmental biology that emphasizes research concerning the health effects of environmental modifications. The relevance of the research to broad problems of the environment is considered. (Quarterly)

ENVIRONMENTAL REPORT. Trends Publishing Company. National Press Bldg. Washington, DC 20004

Short reports on environmental situations and research. Sections on selected publications, environmental trends, conferences and research projects, and an environmental booklist. An expensive but excellent source of material. (Two times/month)

ENVIRONMENT AND BEHAVIOR. Russell Sage Foundation Press, 275 South Beverly Drive, Beverly Hills, CA 90212

Articles dealing with experimental and theoretical studies on the influence of the physical environment on human behavior.

ENVIRONMENT AND PLANNING. Pion Limited, 207 Brondesbury Park, London, NW2, England.

This publication presents an interdisciplinary approach to the trends and problems encountered in environmental research and city and regional planning. Also included are book reviews and reviews of important papers published elsewhere.

ENVIRONMENT NEWS DIGEST. 250 Park Avenue, New York, NY 10017

A very brief coverage of selected environmental news items and tips for action on environmental issues. Easy reading and free on request. (5 times/year)

ENVIRONMENTAL REPORTER. Bureau of National Affairs, Inc. 1231 25th Street, NW, Washington, DC 20037

A weekly periodical that reviews developments in the field of pollution control such as conferences, speeches, reports, and legislation. (Weekly)

ENVIRONMENTAL SCIENCE AND TECHNOLOGY. American Chemical Society, 1155 16th Street, NW, Washingon, DC 20036

Provides monthly information on the research and technology of water, air, and waste chemistry and news of the political and industrial aspects of environmental management. (Monthly)

ENVIRONMENTAL SPECTRUM. Co-op Extension Service, Rutgers University, New Brunswick, NJ 08903

A short newsletter issued regularly that includes information on conferences, meetings, short courses and other happenings that relate to environmental science.

INTERNATIONAL JOURNAL OF ENVIRONMENTAL STUDIES. Gordon and Breach Science Publishers, One Park Avenue, New York, NY 10016

A journal for social, natural, and applied scientists as well as planners and architects that carries news comments, book reviews, and articles on almost any field of environmental science. (Bimonthly)

JOURNAL OF AIR POLLUTION CONTROL ASSOCIATION. 4400 Fifth Avenue, Pittsburgh, PA 15213.

This journal directs itself specifically to problems of air pollution. Features technical papers as well as air pollution news and legislation. (Monthly)

JOURNAL OF APPLIED ECOLOGY. British Ecological Society, Blackwells Ltd., 5 Alfred Street, Oxford, England.

Scholarly journal that presents articles that deal with environmental management but stresses the relations between plants and anthropods important for agriculture. (Quarterly)

JOURNAL OF ECOLOGY. British Ecological Scoiety, Blackwells Ltd., 5 Alfred Street, Oxford, England.

The official publication of the British Ecological Society. Its emphasis leans toward plant ecology and plant-animal relationships. Technical. (Quarterly)

JOURNAL OF ENVIRONMENTAL EDUCATION. Heldref Publications, 400 Albermarle Street, NW, Wasnington, DC 20016

A journal concentrating on research and development in the communication aspects of conservation and environmental education with the aim of producing a citizenry with a more adequate knowledge of our environment and the problems associated with its manipulation. (Quarterly)

POPULATION BULLETIN. Population Reference Bureau. 1755 Massachusetts Avenue, NW, Washington, DC 20036

A semi-popular periodical put out by the Population Reference Bureau that presents topics on the population explosion and the environmental consequences of controlled population growth. (Bimonthly)

REMOTE SENSING OF ENVIRONMENT. American Elsevier Publications, 52 Vanderbilt Avenue, New York, NY 10017

A technical publication with a great number of brief articles on the use of remote sensing techniques for environmental study and management. (Four issues/Volume)

RESOURCES. Resources for the Future. 1755 Massachusetts Avenue, NW Washington, DC 20036.

Presents special topics on resource use and development but tends to be rather pro-industry. Also, presents a yearly review of highlights in the field. (3 times/year)

SOLID WASTE MANAGEMENT. Communications Channels, INc. 461 Eighth Avenue, New York, NY 10001

Deals with the problems, new techniques, and other developments in the refuse removal industry, with an engineering mentality; overloaded with commercial advertising. (Monthly)

WATER, AIR AND SOIL POLLUTION. D. Reidel Publishing Co., Dordrecht, Holland.

A technical international journal on environmental pollution. (Quarterly)

WATER AND POLLUTION CONTROL. 1450 Don Mills Road, Don Mills, Ontario MEB 2X7 Canada

A Canadian business publication covering aspects of water sewage, industrial wastes, and air pollution. It is marketed especially for municipal officers, industrial officers , and engineers. (Monthly)

JOURNAL OF ENVIRONMENTAL HEALTH. National Environmental Health Association, 1600 Pennsylvania Street, Denver, CO 80203

Brief articles, reviews, and statistics on environmental health aimed at the environmental health worker in the field, such as health inspectors and sanitarians. (Quarterly)

JOURNAL OF ENVIRONMENTAL MANAGEMENT. Academic Press. 111 Fifth Avenue, New York, NY 10003

An interdisciplinary journal dealing with the application of ecological principles for sound environmental management. Excellent articles suggesting approaches to important problems that are a must for those interested in good land management. (Quarterly)

JOURNAL OF ENVIRONMENTAL QUALITY. 677 South Segoe Road, Madison, Wisconsin 53711.

Technical periodical dealing with certain aspects of natural and agricultural ecosystems. Multidisciplinary, containing original research as well as brief reviews and analyses of specific problems. (Quarterly)

JOURNAL OF ENVIRONMENTAL SYSTEMS Baywood Publishing Co., 43 Central Avenue, Farmingdale, NY 11735

Analysis and solution of problems relating to system-complexes that make up our environment. Special attention is given to problems dealing with the interface of societal supersystems. (Quarterly)

JOURNAL OF FORESTRY. Society of American Foresters, 1010 Sixteenth Street, NW, Washington, DC 20036

Journal for professional foresters containing short articles of both a technical and nontechnical nature on forest resource management. Also announcements of meetings and the affairs of the society. (Monthly)

MARINE POLLUTION BULLETIN. Macmillan Journals Ltd. Burnel Road, Basingstoke, Hants, England.

Deals with all aspects of deterioration and management of the ecosystems of lakes, estuaries, seas, and oceans. News briefs, comments on issues, reviews, research reports, and news of research programs are regular features. (Monthly)

MOTHER EARTH NEWS, INC. P. O. Box 70, Hendersonville, NC 28739.

A popular periodical with excellent articles on alternative energy systems, organic farming, and alternative life styles. (Bimonthly)

NATURAL RESOURCES JOURNAL. University of New Mexico, School of Law, Albuquerque, NM 87131

Technical reports on the legal and fiscal aspect aspects of ecological problems. (Quarterly)

OUR PUBLIC LANDS. U. S. Government Printing Office, Washington, DC 20402

The official publication of the U. S. Department of Interior, Bureau of Land Management. Articles featured are concerned with the use and conservation of water, fish, minerals, land, parks, wildlife, and recreational resources. Also included are items concerning Indian and territorial affairs. (Quarterly)

PEST CONTROL. Harvest Publishing Co., 9800 Detroit Avenue, Cleveland, Ohio 44102

This publication is directed at various aspects of pest control, especially urban and indistrial. Regular features include news items and reports on pertinent governmental affairs. (Monthly)

POLLUTION ENGINEERING. 1301 S. Grove Avenue, Barrington, IL 60010

This publication contains articles on total environmental control: air, water, noise, solid waste, etc. Regular features include a list of new books which have been reviewed and recommended by the editors as well as brochures, pamphlets and booklets, coverage of legislative trends, and a schedule of meetings. (Monthly)

WATER AND SEWAGE WORKS. 434 South Wabash, Chicago, IL 60605

An industrial- and engineering-oriented periodical that covers new developments and techniques in water and sewage management. Contains announcements of meetings and is loaded with commercial advertising. (Monthly)

WATER AND WASTES ENGINEERING. 666 Fifth Avenue, New York, NY 10019

Directed at municipal and industrial personnel. Coverage includes design, management, and maintenance of municipal and investor-owned water supplies and waste water systems. Also includes suggested books, new items, and manufacturer's literature. (Monthly)

WATER NEWSLETTER. Water Information Center, Inc., 44 Sintskink Drive East, Port Washington, Long Island, New York 11050

Desalination, irrigation, conservation of water, waste disposal, water pollution, water supplies and recycling are among the many topics covered. (Semimonthly)

WATER POLLUTION CONTROL. Institute of Water Pollution Control, Ledson House, 53 London Road, Maidstone, Kent, England.

Features articles on various aspects of water pollution control; technical management, financing, sewage treatment works, etc. (Bimonthly)

WATER RESEARCH. Peragamon Press Limited, Headington Hill Hall, Oxford OX3, OBW, England.

Original research papers concerning water quality management. (Monthly)

WATER RESOURCES RESEARCH. American Geophysical Union, 2100 Pennsylvania Avenue, N.W., Washington, DC 20036

This publication includes a combination of scientific contributions dealing with our water resources from the physical, social, and biological sciences. (Quarterly)

WATER RESOURCES BULLETIN. American Water and Resources Association, 206 East University, Urbana, IL 61801

Engineers, biologists, and social scientists as well may benefit from the interdisciplinary approach taken by this publication. Areas included are education, research, planning, operation, and maintenance of water resources. Also featured are book reviews, news items, and association events. (Bimonthly)

WATER SPECTRUM. Superintendent of Documents, Government Printing Office, Washington, DC 20402

Published by the Army Corps of Engineers, its concern with water pollution problems tends to be crisis-oriented with an emphasis on management by technological modification. Good for keeping abreast of what the Corps is doing or proposes to do to the environment. (Quarterly)

PERIODICALS THAT ARE GENERALLY CLASSIFIED AS CONSERVATION AND NATURE MAGAZINES THAT USUALLY INCLUDE A GREAT DEAL OF MATERIAL ON BOTH EXPLORING THE OUTDOORS AND THE PROBLEMS CONFRONTING OUR NATURAL SYSTEMS, OFTENTIMES INCLUDING A WEALTH OF ILLUSTRATED MATERIAL.

AMERICAN FORESTS. American Forestry Association, 919 17th Street, NW, Washington, DC 20006

The "voice" of the American Forestry Association that presents material directed at the non-expert, on how best to conserve and utilize forest resources. It has many illustrations and photos. It tends to serve as a countervoice to magazines such as the CONSERVATION NEWS, since it is business-oriented. Suitable for use by groups from high school up. (Monthly)

ANIMAL KINGDOM. New York Zoological Society, Bronx, New York, NY.

A Zoo News that includes popular reports on dwindling or endangered species. (Monthly)

AUDUBON MAGAZINE. National Audubon Society, 1130 Fifth Avenue, New York, N.Y. 10028

General magazine for high school level and up. (Monthly) CURIOUS NATURALIST is a leaflet issued by Audubon Magazine for junior high school students.

BIOLOGICAL CONSERVATION. Elsevier Publishing Co., Barking, Essex, England.

Organizational catalog of governmental and private agencies that deal with resource management. (Annual)

THE CONSERVATIONIST. New York State Conservation Department. State Campus, Albany, NY 12226

A state conservation magazine written for popular consumption that covers all phases of conservation and also has national appeal. Magnificant nature paintings are included. (Bimonthly)

DEFENDERS OF WILDLIFE NEWS. Defenders of Wildlife, 731 DuPont Circle Building, 1346 Connecticut Avenue, N.W., Washington, DC 20036

Includes factual material and proposed legislation regarding wildlife. (Quarterly)

INTERNATIONAL WILDLIFE. National Wildlife Federation, 1412 16th Street, Washington, DC 20036

This journal emphasizes the inter-dependence between man and nature and presents conservation news at an international level. (Bimonthly)

JOURNAL OF SOIL AND WATER CONSERVATION. 7515 N.W. Ankeny Road, Ankeny, Iowa.

Semi-popular periodical issued by the Soil Conservation Society of America; presents useful articles and film reviews for high school and adult groups. (Bimonthly)

JOURNAL OF WILDLIFE MANAGEMENT. The Wildlife Society, 3900 Wisconsin Avenue, N.W., Washington, DC 20016

Original papers dealing with wildlife management, as well as lists and reviews of recently published books in the field. (Quarterly)

LIVING WILDERNESS. Wilderness Society, 729 15th Street, N.W., Washington, DC 20005

A periodical presenting "wild area's" point of view with respect to land use and environmental preservation. (Quarterly)

NATIONAL PARKS MAGAZINE. National Parks Association, 1300 New Hampshire Avenue, N.W., Washington, DC 20036

Investigates current conservation issues and legislation. It also offers constructive criticism of private and government agencies but is not preoccupied with such matters. (Monthly)

NATIONAL WILDLIFE. 1412 16th Street, N.W. Washington, DC 20036.

This journal emphasizes the inter-dependence of man and nature presenting conservation news and legislation at state and national levels. (Bimonthly)

ORYX. Fauna Preservation Society, London, England.

Presents general articles on conservation and related biological topics and a worldwide survey of conservation news for the general public. (Quarterly)

PARKS AND RECREATION. 1601 North Kent Street, Arlington, VA 22209

A journal of park and recreation management and its place in the conservation movement. (Monthly)

RED DATA BOOKS. International Union for the Conservation of Nature, Morges, Switzerland.

The most important source of information on endangered species, listing endangered mamals and birds. (Irregular)

SIERRA CLUB BULLETIN. 530 Bush Street, San Francisco, CA 94108

An excellent popular magazine concerned with preserving American's remaining wilderness. (Monthly)

SOIL CONSERVATION. Superintendent of Documents, Washington, DC 20402

A semi-popular periodical issed by the Soil Conservation Service of USDA that emphasizes wise use of land and water resources. (Monthly)

THE LIVING WILDERNESS. Wilderness Society, 729 15th Street, N.W., Washington, DC 20005

This magazine is concerned with scientific studies of the need to preserve wilderness, and the public support for such preservation. (Monthly)

PERIODICALS FROM OTHER FIELDS THAT INCLUDE A SIGNIFICANT AMOUNT OF MATERIAL ON THE ENVIRONMENT AND ITS PROBLEMS.

BIOSCIENCE. 3900 Wisconsin Avenue, Washington, DC 20016

Official publication of the American Institutes of Biological Science. It presents many articles on the biosocial aspects of environmental science. Many of the articles are of a general synthesizing nature and are therefore useful to educators or researchers in allied fields. (Monthly)

THE BULLETIN OF THE ATOMIC SCIENTISTS. 1020-24 East 58th Street, Chicago, IL 60637

A social activist publication that contains authoritative articles on many of the abuses of technology. Especially good with regard to energy problems. Includes book reviews, debates, and vital editorials. (Monthly except July & August)

THE CENTER MAGAZINE. Fund for the Republic, Inc. 2056 Eucalyptus Hill Road, Santa Barbara, CA 93103

The publication of the Center for the Study of Democratic Institutions. Publishes many articles of environmental concern with great emphasis on the political and social aspects. (Bimonthly)

DAEDALUS. American Academy of Arts and Sciences. 280 Newton Street, Brookline Station, Boston, MA 02146

Leading authorities from a variety of fields present scholarly articles on problems of world significance. Especially valuable for material on population and technology. (Quarterly)

THE FUTURIST. The World Future Society, P. O. Box 30369, Bethesda Branch, Washington, DC 20014.

Official publication of the WFS that acts as an impartial clearinghouse for a variety of alternative views of the world's future. A stimulating presentation of many environmentally relevant forecast trends and ideas concerning the future. (Bimonthly)

IMPACT OF SCIENCE ON SOCIETY. UNESCO, 317 East 34th Street, New York, NY 10016.

Present essays dealing with the social consequences of science and technology. (Quarterly)

NATURAL HISTORY. American Museum of Natural History, Central Park WEst at 79th Street, New York, NY 10024.

A general magazine on natural history with frequent articles on conservation. Excellent illustrative material. (Monthly)

NATURE. 711 National Press Building. Washington, DC 20004.

A weekly interdisciplinary journal that presents original research in all fields of science, as well as book reviews and news briefs. (Weekly)

NEW SCIENTIST. New Science Publications, 128 Long Acre, London, England WC2E 9QH.

Provides comprehensive coverage of scientific news. Ecology is a frequent topic. (Weekly)

SCIENCE. AAAS, 1515 Massachusetts Avenue, N.W., Washington, DC 20005.

The official publication of the AAAS that publishes articles, book reviews, technical notes, and editorial comments on all aspects of science. It includes much material on ecology and environmental problems of both a specific and general nature. Lists meetings and new books for ready reference. (Weekly)

SCIENCE NEWS. 1719 N. Street, N.W., Washington, DC 20036.

A brief news summary of the week's scientific developments that includes a substantial amount of material on environmental science. It has a regular subdivision entitled environmental sciences, plus earth sciences, medical sciences, ecology, and others. (Weekly)

TECHNOLOGY REVIEW. Massachusetts Institute of Technology. Room E 219-430, Cambridge, MA 02139.

A sophisticated publication that devotes more than half of its pages to environmentally related material. Especially strong with respect to science policy. (9times/year)

WORLD FUTURE SOCIETY BULLETIN. World Future Society. 4916 St. Elmo Avenue, Washington, DC 20014.

A publication of the World Future Society that includes scientific articles and in-depth book reviews or alternative approaches to the future. Includes sections on news, courses, conference, people, publications, books, games and professional activities. (Bimonthly)

The following environmental films and slide/tape presentations are available for a two-week loan from the DSU.

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BATTLE OF THE BUGS. Produced for the U.S. Environmental Protection Agency by Sensoria Motivation Systems. P.O. Box 1704. Colorado Springs, CO

Filmstrip/cassette presentation designed to inform parents and children about pesticide safety; how to choose the right pesticide for the job, store it and clean up after its use.

EARTH RESOURCE MONITORING FROM SPACE. Talcott Mountain Science Center for Student Involvement, 1974.

The purpose of this educational package is to inform students and teachers of one particular way in which space technology is being used to benefit all of us in our daily lives -- the ERTS-1 system, composed of surface, aircraft, satellite, and data handling components. This system was created by the National Aeronautics and Space Administration as a system of data acquisition and dissemination which seems to have the capacity to see large areas of the earth, often enough, to help us move out from behind our curtain of ignorance.

IT'S ALL YOURS: A FILMSTRIP ON YOUTH INVOLVEMENT IN ENVIRONMENTAL ACTION, from Girl Scouts of the United States of America, 1975.

A cassette/filmstrip package designed to highlight the basic steps involved in planning community action projects, to present material that will plant the seeds for awareness and value -- formation in areas connected to the environment.

CONFLICTS ALONG OUR SEACOAST: COASTAL MANAGEMENT ISSUES OF THE NORTHEASTERN UNITED STATES. Project Oceanology. Avery Point. Groton, CT, 1976.

Five filmstrips delineating the coastal management Issues of the Northeastern United States. They are entitled: (1) Land Use and Growth; (2) National Resources; (3) Water Pollution I: Human Sewage; (4) Water Pollution II: Industrial and Other Wastes; (5) Energy and Progress.

PUTTING IT ALL TOGETHER - ENVIRONMENTAL EDUCATION. Massachusetts Audubon Society.

A carousel/slide/tape program designed especially for school administrators and school committees (boards) as an introduction to any specific program they may wish to introduce. It does not promote any specific program.

"IT'S OUR CHOICE." Institute of Scrap Iron and Steel, Inc. 1974.

An 11 minute sound slide film about land pollution and the need to recycle solid waste, produced for grades 5 through 8. The slide film describes the role of the scrap industry in processing solid waste and other aspects of recycling.

RHODE ISLAND

RHODE ISLAND

All of the following documents are available at DSU in either Hard Copy (HC) or available for two-week loan (L).

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DOWN WHERE THE WATER IS: A COASTAL AWARENESS ACTIVITY BOOK. Sara S. Callaghan. Coastal Resources Center. University of Rhode Island.

An early childhood activity booklet.

ENVIRONMENTAL EDUCATION FIELD GUIDE TO RHODE ISLAND. William Croasdale, et al. University of Rhode Island. 36 pp.

A guide prepared for teachers, to offer experiences that should expand the scope and depth of classroom teaching.

MARINE AND ENVIRONMENTAL STUDIES PROGRAM, A TITLE III ESEA PROJECT. Cranston/Warwick, Rhode Island. 1973.

Marine Environmental Studies is a regional program for high school students conducted by the school departments of Cranston and Warwick, two Rhode Island communities bordering on Narragansett Bay.

MASTER DEVELOPMENT PLAN: SNAKE DEN STATE PART. Rhode Island. Duryea and Wilhelmi. Landscape Architects, Planners, et al. Rhode Island Department of Natural Resources. 1974.

The complete plan for development of Snake Den Park in Rhode Island. It includes a site analysis, plan development, architectural and engineering plans for the use of the park.

PROPOSED PLAN FOR ENVIRONMENTAL EDUCATION IN RHODE ISLAND. Ecology Action and Rhode Island Department of Education. May 1974.

A document which identified Needs, Goals Constraints, Recommendations and Strategies for Environmental Education in Rhode Island. It includes surveys and results from state educators and citizen organizations, and a listing of local resources available in Rhode Island.

RHODE ISLAND'S COASTAL NATURAL AREA: PRIORITIES FOR PROTECTION AND MANAGEMENT. George L. Seavey. Coastal Resource Center, University of Rhode Island. Marine Technical Report #43. 1975.

> A report which identified specific shoreline features in Rhode Island in need of immediate protection and management and examines available techniques for achieving these ends.

RHODE ISLAND NATURAL RESOURCES DIRECTORY. Francis C. Golet, Department of Forest and Wildlife Management, University of Rhode Island. June 1974.

> A directory compiled to provide Rhode Island citizens and natural resources workers alike with descriptions of the major Federal, regional, state and private natural resources organizations currently operating within this State.

TEACHER'S ACTIVITY GUIDE TO COASTAL AWARENESS. Sara S. Callaghan. Produced for the Rhode Island Coastal Resources Management Council by the Coastal Resources Center, University of Rhode Island.

> This was developed as a teacher's guide to complement DOWN WHERE THE WATER IS, in an effort to make young Rhode Islanders more aware of the importance of the wide variety of uses of our coast. It is divided into three sections: I. Rhode Island's Coast; II, Coastal Resources; III. Using Our Coast.

THE FUTURE OF WATER QUALITY IN RHODE ISLAND, A CITIZENS MANUAL. 208 Public Participation Project Office. Ecology Action for Rhode Island.

> An excellent 10-page brochure describing various water classificactions of Rhode Island Waterways, and providing concise summaries of what's being done to improve the situation.

A RURAL LAND USE PRIMER FOR RHODE ISLAND. Cecilia Searle et al.

> This book responds to the need for educating citizens about planning techniques so that comprehensive planning is seen as an asset that allows orderly growth. It seeks to acquaint the reader with the principles of sound planning as well as the limitations and pitfalls. Six sites in rural southern New England, ranging from the coast to an inland landscape of rolling hills are used as specific examples to demonstrate how various planning ideas fit together in actual situations.

Groups and Agencies in Rhode Island with Interest in Environmental/Energy Education.

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AQUIDNECK ISLAND ECOLOGY
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